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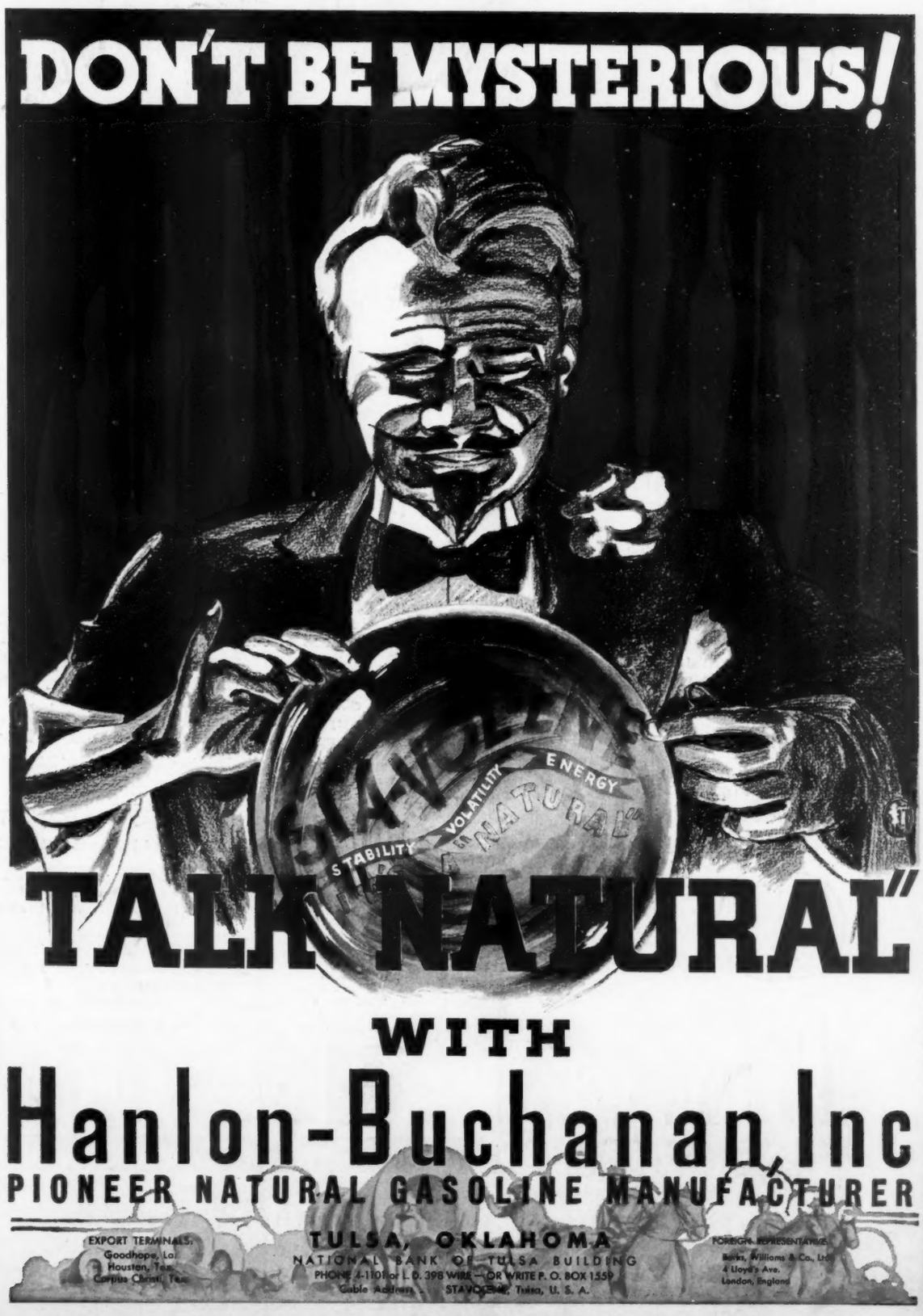

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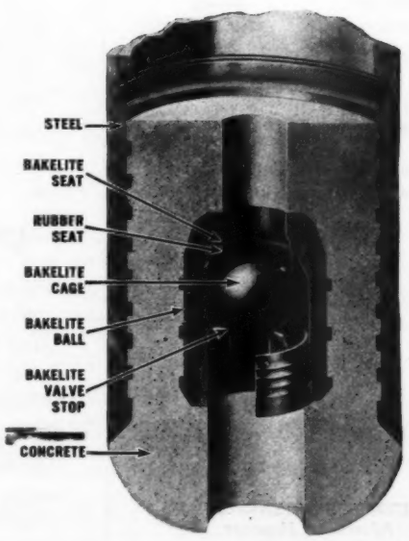

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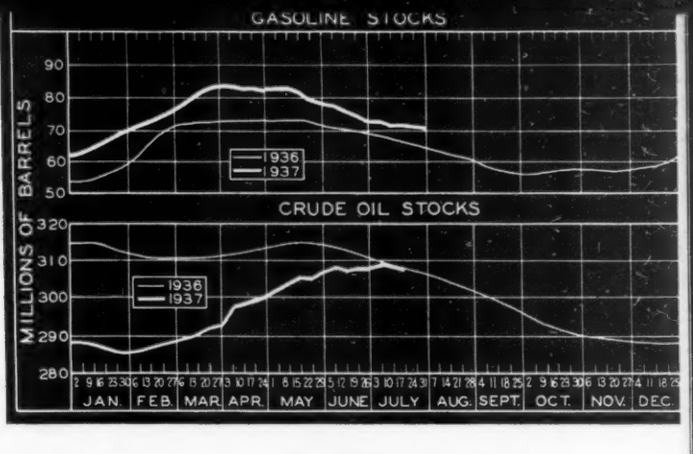


Too Much Crude and Gasoline

CONVICTION grew in the past week that too much crude and too much gasoline are being produced. The markets in both these divisions lack the robust quality which should mark them at this juncture. There is no pronounced weakness, but if the present rate of output continues, the end of the heavy consuming season may find unwieldy stocks on hand.

CRUDE PRODUCTION *3,597,673 barrels daily average—up 16,401 barrels.*

CRUDE STOCKS *307,139,000 barrels as of July 17—down 116,000 barrels.*

GASOLINE STOCKS *70,872,000 barrels as of July 31—down 1,148,000 barrels.*

REFINERY RUNS *3,425,000 barrels daily average past week—up 45,000 barrels.*

In Kansas and Oklahoma it is estimated that close to 30,000 barrels of crude is going to storage daily. Around one-third of this is probably oil which the owners are not unwilling to store against future requirements, but the rest is fattening inventories already too large. A similar situation appears to prevail in Texas, where the railroad commission has fixed the state's August allowable 110,000 barrels daily above that of July and 100,000 barrels above the Bureau of Mines recommendation. Ground for encouragement is seen in the action of the Kansas and Oklahoma corporation commissions in the past week, both having adopted the allowables recommended by the bureau. California too is pushing a program of curtailment.

Some integrated companies in the Mid-Continent territory are neither buying nor selling crude. These estimate that their production is in line with their prospective needs. A few large companies have crude to sell, with no scramble among buyers. Available information discloses only one important company withdrawing crude from storage. Thus, while nobody contends that stocks accumulating now are alarming as measured against current consumption, it is not forgotten that refiners soon will be cutting back their runs to conform with cold-weather demands. It is this consideration that gives the present volume of crude output disquieting significance.

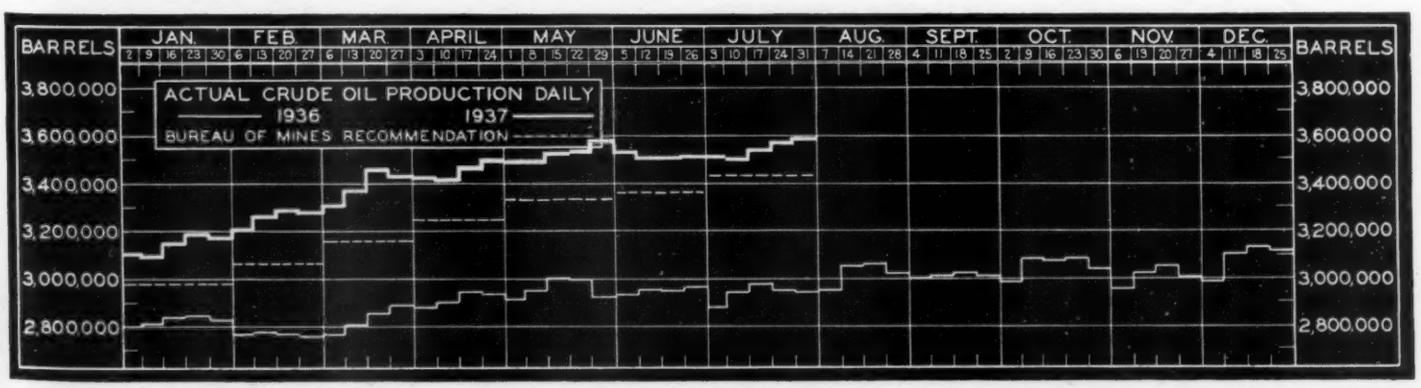
In much the same manner the gasoline market is failing to achieve the positive strength which record-breaking consumption should impart. The industry started with immense stocks overhanging it. These were expected to melt fast as the summer vacation season got under way. Tremendous inroads really have been made on these stocks, and gallonage is all that was predicted. But runs to stills have not yet been reduced sufficiently to accord the gasoline market the full benefit of a banner season.

The week ending July 31 witnessed an average daily crude production of 3,597,673 barrels, an all-time peak and an increase of 16,401 barrels over the preceding week. The biggest advance was in Texas, 14,217 barrels, and 63,947 barrels in excess of the bureau's recommendation. Oklahoma's increase was inconsequential, but its total was 7,950 higher than the bureau's figure.

Daily Average Production for Week

	July 31, 1937	Bur Mines July est.	July state allowable	July 24, 1937
Oklahoma City	153,750	.....	.....	151,725
Fitts	97,650	.....	.....	100,425
Remainder of State	386,250	.....	.....	385,125
Total Oklahoma	637,650	629,700	629,700	637,275
East Texas	476,785	.....	.....	475,737
West Texas	205,963	.....	.....	203,796
North Central Texas	106,816	.....	.....	107,150
Texas Panhandle	80,937	.....	.....	81,198
East Central Texas	125,309	.....	.....	122,689
Gulf Coast—Texas	339,615	.....	.....	331,000
Southwest Texas	103,622	.....	.....	103,200
Total Texas	1,439,047	1,375,100	1,423,273	1,424,830
North Louisiana	91,845	.....	.....	89,400
Gulf Coast—Louisiana	172,225	.....	.....	169,700
Total Louisiana	264,070	253,000	263,000	259,100
California	665,250	605,500	605,500	670,750
Kansas	207,125	195,600	195,600	204,450
Arkansas	28,250	28,400	.....	28,185
Eastern Fields	122,300	122,100	.....	123,000
Michigan	45,081	39,800	.....	44,972
New Mexico	114,410	100,800	114,500	114,420
Rocky Mountain area	74,490	73,800	.....	74,290
Total United States	3,597,673	3,423,800	.....	3,581,272

Increase of 16,401 bbls. daily.



SPARKS FROM THE NEWS

FOOD FOR THOUGHT

The new Kansas potential order based on a composite withdrawal curve will cause a lot of discussions and headaches before final acceptance.

WELCOME

Mississippi has high hopes of entering the list of oil producing states with the fine showing had in a core from the Sun Oil Co. well near Jackson.

FIFTY YEARS HENCE

The life of the East Texas field has been placed at about fifteen years while present developments in West Texas Permian Basin indicate work of developing and producing oil which will require fifty years.

TRACTORS PREFERRED

Refiners and marketers serving the agricultural states see a decided increase in tractor fuel sales this summer. The return to horses to do the farm work has been short-lived.

STABILITY

Natural gasoline prices have shown remarkable ability to advance in the face of a weak refinery gasoline market.

GOING UP

Refiners are hitting close to the three and one-half billion barrel per day mark in their crude run schedules.

ESTIMATES EXCEEDED

Marketers of aviation motor fuels have had their most optimistic forecasts upset by the 40 per cent increase in passenger plane travel this year.

VERSATILITY

Canadian National Railways has placed in operation combination buses, trucks and rail coaches equipped with oil-engines, rubber tires and flanged wheels to transport commodities short distances. This may be the answer to "slow local freight deliveries."

PARK VISITORS

Secretary Ickes says: "If preliminary reports of travel to the national parks are any gauge the 1937 travel for those areas will cause all previous records to topple." One factor in the increased consumption of gasoline.

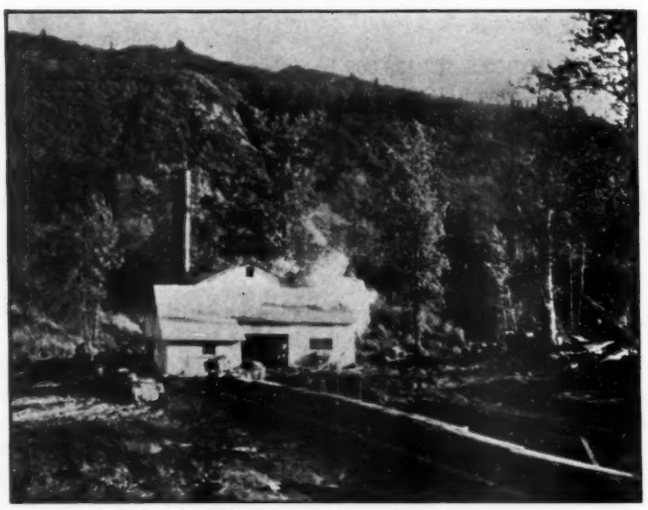
MOSTLY NOISE

Ratification of the Interstate Oil Compact by both houses of Congress reduces the clamor of interested opposition to its proper insignificance.

SLEEPER-BUSES

Sleeper-buses made of light metal will be placed in service next month which are expected to cover 8 miles on one gallon of gasoline in contrast with 3 miles for the present buses. The designers say the new buses can compete with 2-cent rail fares plus berth cost.

WALKING ON DRUMS



Old oil drums used to form support for runway between boiler-house and derrick in Alaska

SUPER-STATIONS

Travel along the country's main highways throughout the Middle West reveals the building of comparatively few filling stations in contrast with the experience of previous years. Those stations which are being built are of the super type.

BEHIND SCHEDULES

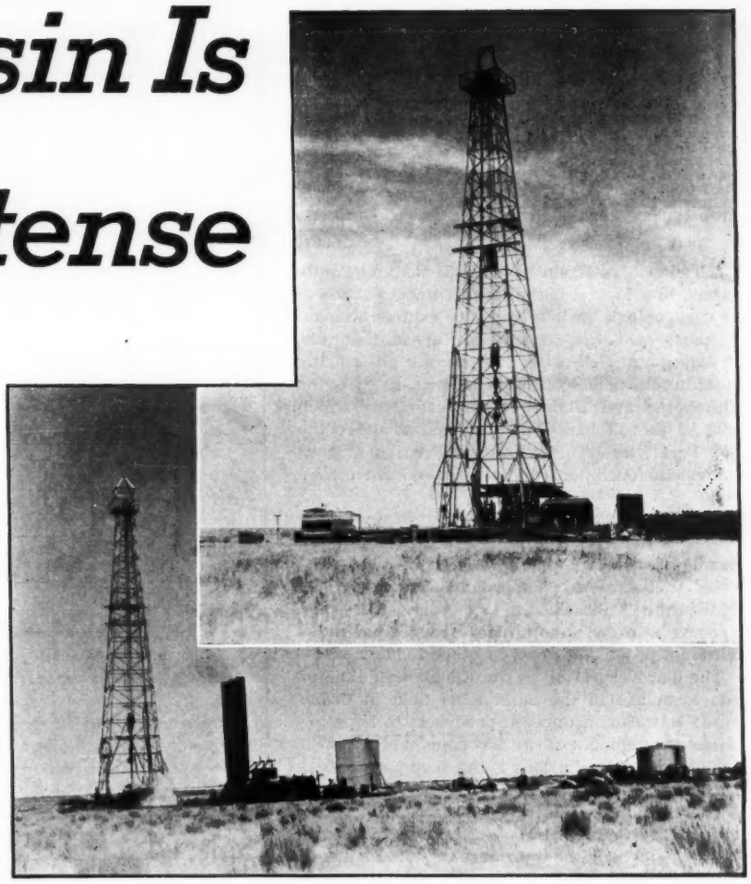
Since gasoline sales follow motor car production fairly closely, it is encouraging to note the automotive industry now has more men on its pay-rolls than at any previous time. On July 1 the number stood about 6 per cent higher than at the previous peak in 1929.

LOOKING AHEAD

It would be sad to wait until a genuine oil shortage was witnessed before attempting to build up stocks.

Permian Basin Is Center of Intense Activities

By L. G. E. BIGNELL



Upper picture: Stanolind Oil & Gas Co. No. 1 A. A. Slaughter, Hockley County, Texas. Lower picture: Pete Wiggins and others No. 1 C. Slaughter Dean, Cochran County, Texas

The Permian Basin of West Texas and southeastern New Mexico, covering about 70,000 square miles, and a large part of it potential oil territory, is now the scene of one of the most intensive drilling campaigns carried on in this country in recent years. To judge by the vast amount of land under lease and proven, this development program will be carried on for many years to come. One company built a new office building in Odessa, Estor County, Texas, within the past year and it is understood the activities of this company in drilling up acreage now proven and producing will take nearly 30 years to complete at the present rate of development.

The center of activity for this West Texas region is in Midland, Tex., for geological staffs, executives and land men. Oil field scouts also make their headquarters in Midland and through the scout headquarters there flow the weekly reports of the area.

For equipment and supplies the town of Odessa, Tex., has become the center within the past year, although there are still many supply stores located in other oil field town in West Texas and New Mexico.

Since the first of this year there have been about 1,945 completions in the Permian Basin district compared with 1,121 for the same period in 1936. There are more than 530 active locations in the 13 counties in West Texas and in Lea County, New Mexico, distributed as shown in table.

In addition to these operations in the Permian Basin area there is a great deal of activity in other portions of West Texas and New Mexico and considerable wildcatting is being carried on throughout the entire region west of Sweetwater and San Angelo.

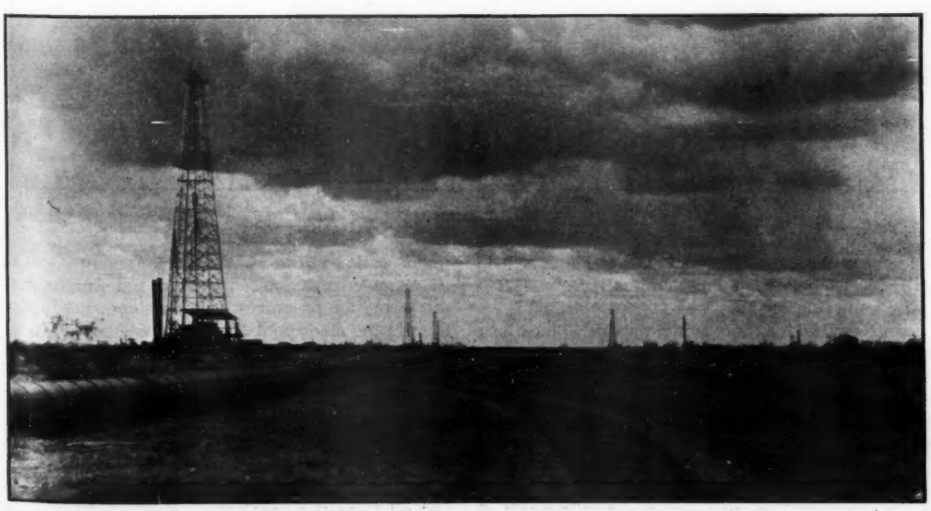
The wells are being drilled with cable tools, rotary outfits and with combinations of these two methods. Power used is either steam or diesel engines. The drilling is not particularly hard but the formations penetrated do not make good rotary mud and it is therefore necessary in most fields to prepare mud from clays shipped in or mined locally. This is not uncommon practice in this area as in developing the fields of Lea County, New Mexico, and south prepared mud was used.

There is an ample supply of good water for steam or for cooling purposes for the internal combustion engines to be had from wells drilled to depths of less than 700 feet. The water sands have been known for a long time and wells drilled to develop water for domestic purposes and stock.

In addition to the activity in oil there is a general wave of prosperity throughout this whole West Texas and New Mexico country with good crops and the cattle doing fine. This, together with the oil boom, has made housing facilities very scarce and there are many new homes being built in all of the towns and cities. Houses are so scarce, in fact, that in some towns it is cheaper to build a small home than to pay rent.

TEXAS

County—	Drlg.	Rigs	Total
Andrews	12	4	16
Crane	27	3	30
Dawson	4	0	4
Ector	86	20	106
Gaines	11	1	12
Hockley	2	0	2
Loving	5	2	7
Pecos	37	5	42
Terry	3	0	3
Upton	45	9	54
Ward	63	11	74
Winkler	55	13	68
Yoakum	5	1	6
Total	355	69	424
NEW MEXICO			
Lea County	108	7	115
Total Permian Basin	463	76	539



Goldsmith field, Ector County, Texas

Area of Large Production

The Permian Basin has had a varied career in development of gas and oil properties, starting with the discovery of Big Lake shallow pay in 1923. This was followed in 1925 with the McCamey and Johnson No. 1 J. H. Baker well in Upton County. For several years after that date the large fields of the area were discovered and developed and they have produced to date about 832,244,272 bbls. of crude oil. This oil has come from the following major pools but there are many other fields in the area which have contributed considerably more oil to

bring the total for the whole district to more than 1,000,000,000 bbls.

Field—	Prod. to July 1, 1937 (bbls.)
Big Lake	86,498,378
Howard-Glasscock	78,058,405
Church & Fields-McElroy	102,491,902
Hendricks	186,314,031
Yates	232,749,038
Winkler sand areas	6,988,444
Hobbs (New Mexico)	77,549,304
Ward County	32,085,694
Monument-Eunice (New Mexico)	28,005,636
Goldsmith	1,503,440
Total	832,244,272

The Permian Basin of West Texas and Southeastern New Mexico is the southernmost portion of the vast geologic basin of Permian sediments covering parts of Texas, Oklahoma, Kansas, Colorado, Wyoming and Nebraska. The gas and oil is being found in four principal formations classified as the Whitehorse and Blaine formations from which most of the oil has been produced to date; the older Permian formations, the pre-Premian or post-Ordovician formations and the Ordovician formations.

One important discovery made within recent months is the saturated limestone stratum of the Permian formation found about 1,600 feet from the top of this section. This producing horizon was opened in the Tubbs field in Crane County in April. It seems to offer possibilities of development of additional producing areas in other fields.

The discovery of oil in the Ellenberger lime of Ordovician age in the Sand Hills field in Crane County has also encouraged producers to hope for further development of this pay zone in other parts of the Permian Basin. This is the deep pay zone of the Big Lake field.

There are a line of sand pools to the east of the fields in Lea County and West Texas which have been developed and hold promise of yielding a considerable volume of oil although this sand production is not as good at the northern end of the string of New Mexico pools as farther south in Texas.

The original Permian lime producing horizon is being opened in a string of fields to the east of the New Mexico line and from present indications it appears as though there will be a long string of these fields running north from Yates up into Hockley and Cochran counties. Many new pools have already been developed along this trend, including the 20,000-acre Goldsmith field in Ector County and the 7,460-acre Means field in Andrews County.

This whole area has been carefully explored with geophysical instruments and many structures mapped. The older fields are known to lie along the old Capitan reef on the east edge of the Delaware Basin. The new line of fields is expected to outline the eastern edge of the Central Basin Platform and the western margin of the Midland Basin and it is along this trend that much of the future work will be done.

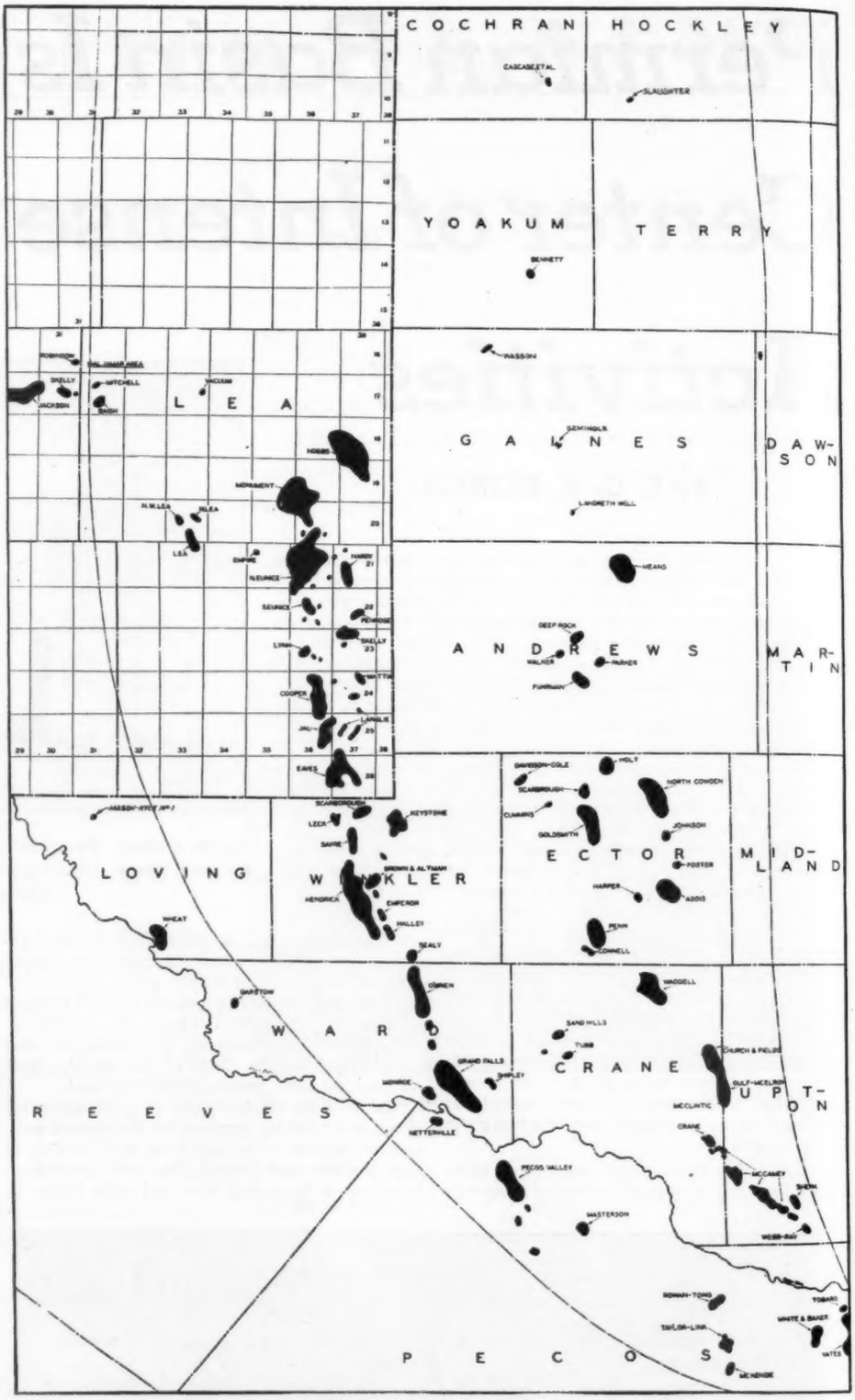
In the July 15 issue of The Oil and Gas Journal, page 36, there is a map with an article by Neil Williams showing these geological features.

To indicate the magnitude of the future work to be done in this area there are only about 40 wells completed in the Means pool in Andrews County which as now outlined contains about 7,460 proven acres. Drilled on a 20-acre spacing this means there must be over 300 more wells completed to develop the whole field. At the rate of 50 wells per year this will mean six years more drilling.

In the Church & Field-McElroy field in Crane-Upton counties there are 13,500 proven acres with only about 425 wells completed. This leaves 925 wells still to be drilled if the 10-acre spacing plan is carried out.

The Goldsmith-Scharbauer field in Ector County is credited with 20,000 acres with about 140 wells completed. This field is being drilled on a 20-acre well spacing pattern which leaves more than 800 wells still to be drilled.

In all of these fields the development work is being carried on in a systematic manner and the present outlet for the West Texas fields is a little over 200,000 bbls. of oil daily while the New Mexico daily allowable for July was 114,500 bbls.



The Permian Basin oil fields Map by E. C. Jacobson, Tulsa

In New Mexico there remain about 50 locations to be drilled in the Monument-Eunice field. These two pools have been developed so it is possible to determine that there is a section of impervious and low-porosity rock separating them at about the north line of sections 23 and 24 in Township 36, and sections 19, 20, 21 and 22 in Township 37, Range 20w. The surface division line has been designated as an east-west line one-quarter of a mile south of the above line and this will separate the two pools for proration purposes. As the Monument pool has been drilled more recently than the Eunice pool the formation pressures in it are somewhat higher than in the older pool. The two pools are produced under different proration methods and while there are two pools they really form one large field.

At present this Permian Basin area is one of the most active in this country and judging from past development work done in this region it is going to take a good many years, some authorities say 50, to fully develop and produce all the gas and oil from the now-known fields and from the new pools still to be discovered and developed.

Humble Adding Three Natural Gasoline Units in Gulf Area

By GEORGE WEBER

The Humble Oil & Refining Co. is engaged in a widespread program of natural gasoline plant construction on the Texas Gulf Coast. With seven plants now in operation throughout the state, the company's scope of operations will be enlarged by the addition of three new units. These three plants will augment the daily production of Humble natural gasoline from 140,000 gallons per day, to a total approaching 200,000 gallons per day.

While this expansion program will have a marked effect on gasoline production in the Gulf Coast, the factor of the increased conservation which it represents is of even greater importance. It marks a substantial progress in the utilization of resources already developed but as yet unrecovered.

Eliminating Waste

The entry of new plants in three Gulf Coast fields will facilitate the recovery of valuable motor fuel from approximately 85,000,000 feet of gas produced daily. A step further is accomplished in one plant, where residue gas after stripping will be utilized as industrial fuel, entirely eliminating waste.

The first plant to be completed in the current project is a compression absorption unit in the Tomball field of Harris County. This plant has just begun operating. Located 30 miles northwest of Houston, it has become an integral part of two of the company's latest projects.

The Humble company now operates gas lines from the Tomball and Anahuac fields which serve industrial consumers in the Houston area, and in the Sabine district to the east. The new Tomball natural gasoline plant forms a well-planned part of that system.

The unit takes two types of gas in the field. From oil well separators, wet gas is gathered and charged to the compressors. In addition, production from the gas wells in the field is also processed in the plant. The residue from both types of gas is charged to the mains in the new gas system, leading to the consuming centers to the south and east of the field.

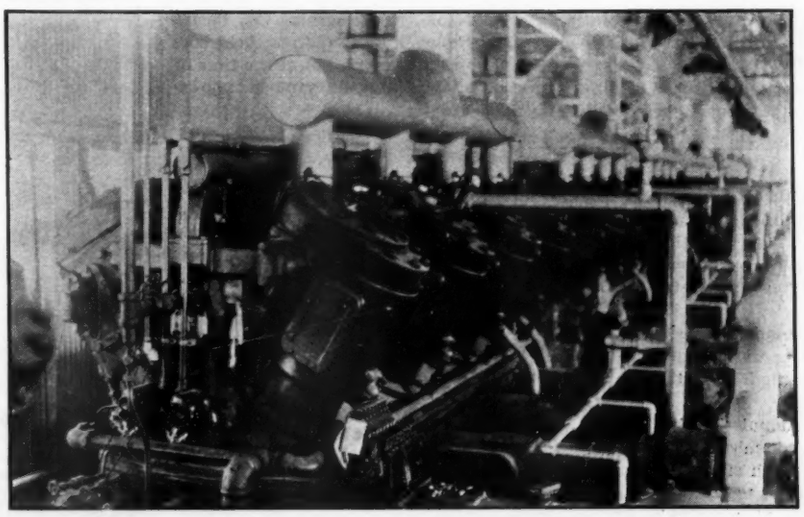
Operation of the Tomball plant will be governed by the demand for the residual industrial fuel. The take of gas produced together with oil will be relatively steady, depending on the allowable production of oil in the field. That additional volume of gas needed to meet the current demand for industrial fuel, will be supplied by withdrawing production from the gas wells in the field. Thus two-fold conservation is accomplished in the full use of gas produced with oil, and in the minimum withdrawal from gas reserves to meet the immediate demand.

TYPICAL GAS ANALYSIS—TOMBALL
(Normal Gas-Oil Ratio Well)

Component—	Per cent volume
Methane	80 14
Ethane	9 12
Propane	5 41
Iso-butane	1 40
n-Butane	2 06
Iso-pentane	1 87
	100 00

20-pound Reid V.P. — .91 g.p.m.

From the natural gasoline angle, the plant is incorporated in the new Humble project linking the East Texas and intermediate fields with the company's principal refinery at Baytown. Briefly the plan provides for production of high vapor pressure natural gasoline together with butanes and propane in the fields. The light product is handled by a pipe line terminating at Baytown. At that point the natural gasoline will be stabilized, and the light ends will be polymerized to produce a high-octane motor fuel blend.



Nine 300-hp. compressors of the new V-type in the Tomball plant

The Tomball plant is capable of producing 22,000 gallons per day of that unstabilized product. The gas produced with oil is gathered in a separate system. After scrubbing to remove the heaviest fractions, it is boosted from the initial intake pressure of 12-inch vacuum to the operating absorption pressure of 800 pounds. This is done in three stages, the first discharging at 35 pounds and the second at 300 pounds. Between each of the compression steps, scrubbing and intercooling are practiced.

The compression bank consists of nine 300-hp. gas-driven units of modern V-type design. High-pressure gas from the compressor discharge lines enters two main absorbers, followed by final stripping in a reabsorber. The product is fractionated from the oil in a steam stripper unit, and has a Reid vapor pressure of approximately 100 pounds. The need for stabilization at the plant is eliminated, since the product is charged to the Baytown gasoline line together with similar production from the East Texas and Conroe fields. The Tomball line joins the main trunk at Satsuma.

Gas wells in the field produce at a pressure ranging from 2,000 to 2,200 pounds and the plant take from that source is charged directly to the absorber section. A yield of 1 gallon per m.c.f. is expected from the gas produced with oil, and about one-half gallon per m.c.f. will be realized from gas-well production.

TYPICAL GAS ANALYSIS—TOMBALL
(Gas Well)

Component—	Per cent volume
Methane	93 77
Ethane	3 83
Propane	1 41
Iso-butane	0 23
n-Butane	0 30
Iso-Pentane, n-Pentane	0 24
Hexane	0 22
	100 00

20-pound Reid V.P. — .22 g.p.m.

Contracts were recently awarded for construction of the second plant, which will operate in the Dickinson field of Galveston County southeast of Houston. That unit, a well pressure absorption type plant, is now in initial construction stages. Gas will be taken from Humble and other wells in the field where their production justifies connection into the field gathering system. Production from other leases will be taken ratably in the same proportion to that from the company's own wells.

Gas taken from separators in the field averages 40 pounds, and operating pressure in the plant will approximate 35 pounds. A 40-gravity, 180-molecular weight absorption medium will be used, stripping approximately 99 per cent of the pentane present in the gas, together with what butanes the 26-pound product will contain after stabilization. The yield is estimated at one-half gallon per m.c.f., placing plant production at about 15,000 gallons daily.

TYPICAL GAS ANALYSIS—DICKINSON

Component—	Per cent volume
Methane	93 01
Ethane	3.26
Propane	1.90
Iso-butane	0 49
n-Butane	0.50
Iso-pentane	0.24
n-Pentane	0 20
Hexane	0 27
Heptane	0.13
	100 00

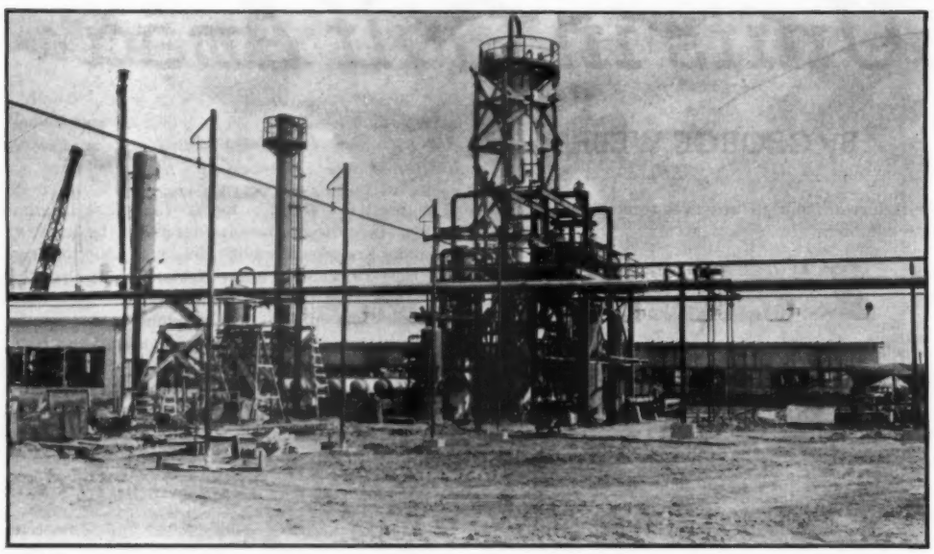
26-pound Reid V.P. — .53 g.p.m.

The plant is to be located on Dickinson Bayou. Its capacity is rated at 35,000,000 feet of gas daily, and its cost at $250,000. A conventional low-pres-

sure absorption plant, the unit will comprise absorber, reabsorber, still and stabilizer.

Advantage is taken of the proximity of cooling water in Dickinson Bayou. Instead of the regular cooling tower common to natural gasoline plants, the base only will be constructed and bayou water will be circulated continuously. Cooling coils are installed in the Flour Bluff field of Nueces County in Southwest Texas. That plant will also be of the low-pressure absorption type, operating at a pressure of approximately 35 pounds.

About 8,000,000 feet of gas from the separators of the lower gas-oil ratio wells will be processed daily in the new plant. The additional 12,000,000 feet of available higher gas-oil ratio production will boost the plant operations to 20,000,000 feet per day. Natural gasoline production at the Flour Bluff plant is estimated to reach 10,000 to 12,000 gallons per day.



Absorption and distillation equipment during installation

to be entirely enclosed, preventing any contamination, and the temperature rise in the water returned to the stream will be negligible.

Water for steam generation is available from wells on the plant site. Little water for this purpose will be required since the steam system is entirely enclosed.

New Flour Bluff Unit

Bids are now being considered for the construction of the third new Humble gasoline plant, to be

Almost all of the leases in the field are held jointly by the Humble Oil & Refining Co., Barnsdall Oil Co. and Flour Bluff Corp. The field consists of 65 producers at present, but at the time of initial operation of the plant, the number may exceed 100.

Texas Hearing August 19

AUSTIN, Tex. — The Texas Railroad Commission has ordered a statewide oil and gas proration hearing August 19 to receive evidence for September allowable schedules and called on refiners for testimony concerning necessary working stocks. Crude storage aboveground and the amount needed for working stocks, pipe line operations and the quantity in transit in tankers figured in the commission's hearing last month.

"It is the desire of the railroad commission that refiners of Texas crude give the commission the benefit of their views as to how much crude the refinery should have on hand in order to promote economic refining practices without interruption," said Chairman C. V. Terrell of the commission. "That is to say, it is necessary to have 60 days' or 30 days' or 90 days' working stocks on hand, over and above what it takes to charge the stills. It is the intention of the commission to see to it that plenty of crude is allowed to be produced so that refiners within our state and those outside of the state using Texas crude will not be cramped in their operation due to shortage."

Crusaders Buys Fleetborn

Purchase of all properties and stock of the Fleetborn Oil Corp. of Ada, Okla., by Crusaders Petroleum, Inc., for more than $5,000,000 was announced by R. W. Wilson, president of Crusaders, who said transfer of properties and assets will begin immediately. Fleetborn properties, built up during the past 15 years in Oklahoma, extend into Texas, Kansas, New Mexico and Louisiana. Its largest holdings in Oklahoma are in the Fitts field of Pontotoc County, home of W. B. Osborn and O. F. Fleet, organizers of the company. Fleetborn properties will be merged with those of other units of the Crusaders, it was reported, with headquarters at Ada.

Ordovician Field in Crane

FORT WORTH, Tex., Aug. 2.—Gulf Oil Corp. No. 5 Waddell, section 4, Block B-27, a quarter mile south of the first Ellenberger well in Sand Hills field, western Crane County, is now shut down at 5,971 feet after it cored saturated lime from 5,954 feet. When shut down it flowed 319 bbls. per hour through casing with drill stem in hole. This well proves the Ordovician field which first well indicated.

New Storage Depot

LONDON, Ontario.—Shell Oil Co. of Canada, Ltd., will erect here an oil storage depot with two 15,000-gallon tanks.

OBITUARIES

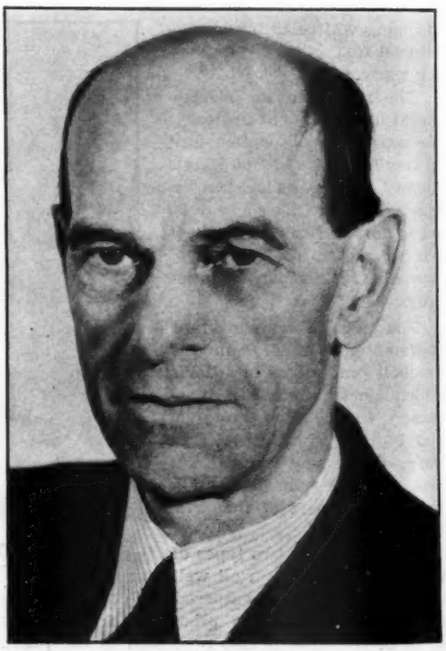
THOMAS F. MAHER, president of Chapman Valve Manufacturing Co., Indian Orchard, Mass., died July 30.

LOUIS BLAUSTEIN, of Baltimore, Md., founder of American Oil Co., and former president of Pan American Petroleum & Transport Co. and subsidiaries, died July 27 at Atlantic City, N. J. He retired in January as president of Pan American Petroleum & Transport Co., Mexican Petroleum Corp., Lord Baltimore Filling Stations, Inc., and American Oil Co. Mr. Blaustein and his son, Jacob, who survives, were officers of the Pan American group from 1924 until early this year. Affiliation with Pan American came in 1924 when it acquired a half interest in the Blaustein American Oil Co. and its subsidiaries of which Lord Baltimore Filling Stations, Inc., was the most important. Mr. Blaustein remained a member of the board of Pan American and of American Oil Co.

S. G. COCKRELL, a pioneer operator in the Panhandle, Amarillo, Tex., area, died in that city. He was one of the organizers of the Cockrell-McIlroy Oil Co.

CAMDEN L. BLOOM, 69, pioneer oil and gas operator in Kansas and Oklahoma, died in Independence, Kans., July 25. Much of the early drilling in southern Kansas and northern Oklahoma was done by McBride & Bloom. At one time Mr. Bloom was president of Independence Gas Co. He organized Coffeyville Gas Co. in 1882. He drilled two famous wells, No. 1 Norman, east of Neodosha, Kans., the first commercial oil well in the Mid-Continent and the Cudahy well on the Big Caney River. The well, now in a park in Bartlesville, is still on the jack, and a marker records it is the oldest producer in the state. He was born in Clearfield, Pa.

C. W. ECKLES, 58, superintendent of construction, Union Oil Co. of California, died July 26 at Los Angeles. He had directed construction work for Union Oil Co. in almost every phase of its diversified operations, not only in this, but also in foreign countries. He had been with Union Oil Co. since March, 1922.



C. W. ECKLES

WILLIAM F. KAISER, 66, manager of Frick-Reid Supply Co. at Eldorado, Kans., died recently. He had lived in Eldorado since 1916 and had previously resided at Cushing and Drumright, Okla., where he opened stores for Frick-Reid. He had been associated with the firm for 24 years.

Gasoline Dealers' Association Accused in Pennsylvania

PHILADELPHIA, Pa., July 31.—Charges that the local independent Gasoline Dealers' Association used "strong-arm" methods to make nonmember independents raise their prices to the association level enlivened the hearing by the Pennsylvania oil industry investigation commission. The commission was created by Governor Earle to "determine if the industry should be placed under public utility regulation."

"You mean they try to put the pressure on you?" Judge Ralph H. Smith, of Pittsburgh, chairman of the commission, asked.

"I mean they put the screws on us," Joseph Grossman, proprietor of the Ace Tire Supply, answered.

"A shining example, gentlemen, of the chaotic marketing conditions in the industry," Judge Smith commented.

Mr. Grossman accused Albert Fish, president of the association, and Thomas Pugh, secretary, of telling him they "would make it tough" for him if he did not conform to their prices.

Edward Stevens, proprietor of the Diamond Auto Laundry, said when he failed to raise his price recently he was approached by several South Philadelphia gangsters. He held them off with a pair of pistols, he said, until police arrested them, but they were released "through a Democratic committeeman."

Testimony that large oil companies subsidized dealers to the extent of providing them with "everything from free air compressors to floodlights" was made by Harry Sley, president of the Sley System Garages, Inc., and by Meyer Eglin of the Eglin Garages, Inc., and Isador Leff of the A-1 Tire Stores.

William A. Miller, president of Major Petroleum Corp., said the government was holding an umbrella over the producer-refiner while the independent companies were left out in the rain. "The producer, through the Connally 'hot' oil law and proration, can make the price of crude anything he wishes. Before the passage of the Connally law, the crude oil price was 10 cents a barrel. Now it is $1.37. The integrated companies are making so much on crude oil they are in position to sell their merchandise at prices with which the independents cannot compete," Mr. Miller stated.

James W. Forgie, manager of marine traffic, Atlantic Refining Co., told the commission the cost of shipping gasoline from the Gulf to Philadelphia has risen from 18 to 45 cents in the past year while the cost to tank owners has risen only from 16 to 17½ cents. He disputed Judge Smith's suggestion that the tanker shortage was caused by use of American tankers in foreign trade, explaining most American companies ship most export gasoline in chartered foreign ships not permitted to carry gasoline in U. S. coastwise trade.

Samuel B. Eckert, vice president in charge of sales, Sun Oil Co., said competition from individual dealers and federal and state legislation had forced his company to discontinue its own stations. He added unemployment insurance, social security and compensation laws made company-owned stations "less desirable." He testified that when competitors reduced their prices, the company often requested its dealers to follow suit, adding it was impossible to compete against prices 2 cents under the average.

R. H. Colley on Stand

Robert H. Colley, president Atlantic Refining Co., explained that gasoline is not sold on a cost-plus profit basis "but on the basis of competition." After Mr. Colley stated the price policy is delegated to the vice president in charge of sales, W. C. Yeager, the commission assumed that, on the premise that other companies follow Atlantic's lead, it is a "fair statement" that Mr. Yeager sets the state price.

Mr. Colley said recently Atlantic had shipped a cargo of gasoline to Spain under an order received two years ago. The export price, he said, was under 5 cents a gallon. Mr. Colley added export shipments represent about 18 per cent of Atlantic's business.

W. C. Yeager, of Atlantic Refining Co., testified there was a 1-cent difference in the tankcar gasoline price in eastern and western Pennsylvania. He denied Atlantic issued courtesy cards entitling certain persons to discounts and said if a discount is given, the dealer must take the loss and not the company.

W. V. Hartman, vice president of Gulf Oil Corp., and Edgar H. Collins, vice president of Standard Oil Co. of Pennsylvania, both stated new legislation had induced their companies to lease service stations in recent years. Mr. Hartman said Gulf began leasing stations under the NRA and continued the practice because of social security laws and increased tax burdens here. Both said half-cent discounts were given dealers who handled their products exclusively.

Clarence Shock, president of the Pennsylvania Independent Jobbers Association, held that monopolistic practices in the industry today would make John D. Rockefeller look like 30 cents. "We independents believe in rugged individualism to safeguard the public but the control by monopoly has never been as bad as it is today," he said. "We feel it is not feasible for the state to take over the oil industry nor is it the right way to clean up the business. Gasoline could be sold for 12 cents exclusive of tax and everyone would make a profit."

P. H. Curry, president of South Penn Oil Co., said stocks of Pennsylvania grade crude oil had dropped from 7,000,000 bbls. in 1932 to 3,700,000 bbls. this year, while the price has advanced from $1.80 to $2.82 in the Bradford field. He estimated Pennsylvania reserves would be exhausted in 30 years, basing his estimate on the American Petroleum Institute's recent survey which placed the reserves at 307,000,000 bbls.

Told his company had been named as the crude oil price setter, Mr. Curry said the price was based on supply and demand and exhibited charts showing trends in recent years.

Fred J. Fournier, of Wilkinsburg, an independent distributor, charged large oil companies with taking a census of patrons of independent stations and then soliciting the business from the largest. He told of beating the new price posting law by entering on two-year contracts with customers allowing them a discount of from 2 to 2½ cents before the law took effect on July 1.

It was indicated no further hearings would be held until after Labor Day.

Acme

PENNSYLVANIA OIL INDUSTRY INVESTIGATION COMMISSION—Rep. Michael C. Chervenak, Jr., John E. McComb, Judge Ralph H. Smith, William H. Godfrey and Senator E. J. Thompson; the witness is R. H. Colley, president, Atlantic Refining Co.

The OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

Published weekly by The Petroleum Publishing Company at Tulsa, Oklahoma

Taking Potentials

Kansas comes forward with a proposed method for taking potentials which may be an important step towards a solution of this vexatious detail in the regulation and conservation of crude oil production.

The necessity for a change is summarized in the Kansas State Corporation Commission order stating that "the taking of physical tests too frequently and for too long a duration to establish well potentials tends to create waste by a premature encroachment of water."

The commission, after holding a number of hearings and appointing an oil advisory committee to recommend improvements in method of determining potentials, has recommended the taking of two consecutive four-hour tests, basing the potential on the smaller production in a four-hour period. Having established in this way the potential of all wells, it is further recommended that all future potentials be determined by the use of a composite withdrawal decline curve.

Instead of the former 24-hour tests usually three times a year the new method provides for the taking of the two four-hour tests once in nine months after the well is completed.

The prorated production of West Kansas fields is largely from lime formations requiring the handling of large quantities of water. The results of proration have been clearly beneficial to these pools. But the past method of taking potentials has been uneconomic. Although in the future, the present system may require modification, it appears to be a step toward an economic handling of existing conditions.

The application of engineering science in the regulation of the East Texas field showed what could be accomplished if better methods were used. Conditions in Kansas, of course, are not exactly comparable, and there are wide variations in wells and pools but it was felt that scientific methods could be applied as successfully there, keeping in view the purpose of real conservation to produce the oil as needed and to assure the largest recovery and use.

This, the Kansas commission believes, may be accomplished by its new regulation. The composite withdrawal decline curve, based on actual experience of wells, with adjustments considering spacing and other factors, every nine months, should, it thinks, reasonably reflect the potential and prevent inequitable or unfair taking from a common source of supply.

Criticism, however, is being heard, but it will require some time to give the plan, which becomes effective September 1, a fair test.

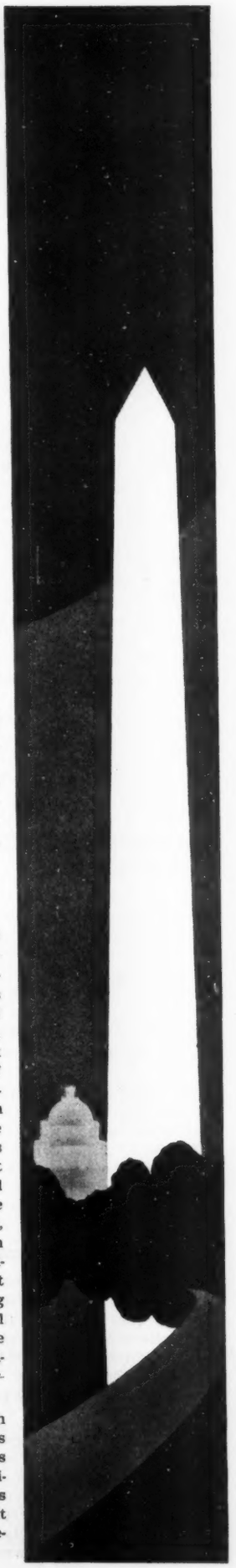
The important factor is that Kansas has undertaken a practical study of means of obtaining equitable potentials and at the same time effecting genuine conservation.

Since the inception of proration, methods for taking potentials have differed widely and the results, at times, have made some of them seem worthless. Many have been wasteful, in both oil and money, largely because they were used to obtain the largest allowable rather than to promote the most efficient production of oil.

The action in Kansas, however it may require to be amended after actual experience, is at least a move in the right direction and away from methods that have been admittedly wasteful and inefficient.

Conservatives Breaking Away From President

By HENRY D. RALPH



WASHINGTON, D. C., Aug. 2.—Senate passage of the Black bill to regulate wages and hours in manufacturing industry brought congress a step nearer adjournment and indicated that most of President Roosevelt's legislative program will be enacted at this session, but the five-day senate debate revealed clearly that the administration's forces in congress are seriously disintegrating and that in the future the president will have increasingly greater difficulty in getting through his reform legislation.

A sizeable bloc of conservative democrats, notably many from southern states, broke away to vote against passage of the Black bill, a fact which showed that the wounds caused by the long battle over Supreme Court reorganization are too deep to be healed easily, if at all.

Little Effect on Oil

As it passed the senate, the Black bill will have little direct effect on most branches of the oil industry. A Labor Standards Board is to be created with power to fix minimum wages and maximum working hours for all producing and manufacturing industries but the board may not fix any wage higher than 40 cents per hour or any work-week shorter than 40 hours. The implication is that lower standards may be set for many industries, since a long list of guiding principles is given the board and no wage or hour order may be issued until after investigation and hearings. Industries with labor standards above those named in the bill may never have any dealings with the board, and other industries will not be affected in any way until the board specifically takes up their cases. Agriculture and many agricultural processing industries are specifically exempted. Child labor is prohibited, meaning the employment of persons under 16, or under 18 in hazardous occupations, but the form of this prohibition is not that proposed by the administration. Instead the senate substituted the Wheeler-Johnson child labor bill which was carefully drafted to give effect to state child labor laws and to get around the old Supreme Court decision invalidating the child labor law of the Wilson administration.

In the house, however, there looms the possibility of a wage-hour bill much more drastic in its effects on business and on labor. The house labor committee, after several weeks of virtual idleness, has tentatively agreed on a number of amendments to extend the bill's scope. One such would make the bill apply to employes of retail establishments, including filling stations, whereas the senate bill expressly exempts such. Another amendment would permit the board to fix minimum wages as high as 70 cents per hour and to establish maximum working weeks as short as 35 hours. There is also a restriction on imports from countries with low labor standards which might compete injuriously with domestic producers whose labor costs are increased by operation of the act. The house is scheduled to receive the bill from its labor committee in a few days and to begin consideration of it at once, but the fact that a number of important house leaders are cool toward it makes its ultimate fate somewhat uncertain.

Antitrust Action

Careless use of one word caused a mild sensation in eastern oil circles this week when press dispatches out of Washington stated that the Department of Justice was considering antitrust action against oil jobbers in the eastern states. The confusion came about when somebody unthinkingly used the word "jobbers" to mean oil distributors in general.

It has been an open secret in Washington for many months that the Department of Justice has been investigating complaints of price fixing in the oil industry in the East. In fact, complaints against antitrust violations somewhere in the oil industry are so common that it would be news if the department were not investigating oil prices. A Washington newspaper man this week got wind of the eastern investigation and asked Attorney General Cummings at a press conference if it were true that the department is investigating an antitrust complaint against eastern oil jobbers, and the attorney general, apparently in an unguarded moment, replied there was such an investigation pending in the department, and then passed on to another subject without further comment.

Subsequent inquiry of the antitrust division, however, elicited the positive information that there is no present investigation against jobbers. The division is still continuing a study of charges of price fixing in the eastern states which were laid before the department by independent jobbers at the same time the jobbers complained of antitrust violations in the Middle West which resulted in the Madison, Wis., indictments which will be brought to trial this fall. The eastern investigation involves many of the same companies as those named in the Madison indictment and the charges are virtually the same. Attorneys in the antitrust division declined to indicate how far this investigation has progressed or whether or not any indictments will be sought in the near future, but they insisted the investigation is generally against the major companies and that independent jobbers as a whole are not involved in the alleged antitrust violations.

Interstate Oil Compact

Congress acted speedily and without a hitch in giving its approval to a two-year continuation of the interstate oil compact. Committees in both house and senate reported resolutions for this purpose unanimously without holding hearings and both bodies approved the resolution without a vote and sent it to the president. There was no discussion in the senate, but in the house Representative Fred Biermann of Iowa took advantage of the opportunity to say a few words in behalf of his bill to divorce marketing from other branches of the petroleum industry. Unanimous consent to consider the resolution was asked in the house and Representative Biermann gave congressmen from oil-producing states a few anxious moments by reserving the right to object while he made a speech, but after a few remarks he announced that he did not object and the resolution went through without the formality of a vote of any kind. During the course of Mr. Biermann's remarks, several representatives of oil-producing states interrupted him to give him assurance that they favor considering his divorcement bill on its merits but pleaded with him not to object to the interstate compact on the ground that it had nothing to do with his complaint against integration of the major oil companies. Earlier in the week Mr. Biermann inserted in the Congressional Record a lengthy argument in behalf of his divorcement bill, but the house committee on interstate and foreign commerce has made no move to give it consideration.

The recent weeks of the session have been crammed with more uncertainties and upsets than have occurred in congress for many years. The administration's control over congress has been definitely weakened and future party solidarity seriously threatened. Through it all runs intensive speculation as to the future of the New Deal, the course President Roosevelt will pursue in the next three years, and the issues to be presented to the voters in the elections of 1938 and 1940.

Papers on Petroleum Chemistry Before American Chemical Society Meeting

Advances in petroleum chemistry will be reported to the American Chemical Society at its ninety-fourth meeting, in Rochester, N. Y., September 6 to 10. Twenty-eight papers are scheduled for presentation before the Petroleum Division, of which Dr. J. C. Morrell of Chicago is chairman. Numerous other reports will be read at joint symposia in which oil chemists from the United States, Europe and Canada will participate.

Thomas Midgley, Jr., vice president of Ethyl Gasoline Corp., will be chairman of a symposium on characteristic properties of hydrocarbons on Tuesday, September 7. Speakers will include:

W. R. van Wijk, J. Smittenberg, H. Hoog, and R. A. Henkes of the Laboratory of N. V. De Bataafsche Petroleum Maatschappij, Amsterdam, Holland; W. F. Seyer and R. D. Walker of the University of British Columbia, Vancouver, Canada; Aristid V. Grosse, Vladimir N. Ipatieff, R. L. Smith, and K. M. Watson of Universal Oil Products Co., Chicago; Frederick D. Rossini, National Bureau of Standards, Washington, D. C.; Johannes H. Bruun, Mildred M. Hicks-Bruun, and W. B. Mason Faulconer, Sun Oil Co., Norwood, Pa.; W. B. Kay, Standard Oil Co. (Indiana), Whiting; F. R. Russell, Standard Oil Development Co., Elizabeth, N. J., and H. C. Hottel of Massachusetts Institute of Technology.

Dean Frank C. Whitmore of Pennsylvania State College will preside at a symposium on the chemical utilization of petroleum hydrocarbons on Monday, September 6. Doctor Morrell and Dr. Gustav Egloff of Universal Oil Products Co., will open the symposium with a paper on "Petroleum as Source Material for Chemical Derivatives." "Hydrocarbons in Virgin Naphthas" will be the theme of Prof. M. R. Fenske, C. O. Tongberg, and W. J. Sweeney of Pennsylvania State College. Other papers will be read by:

Wallace A. McMillan, Texas Co., New York; A. J. Paik, Sherlock Swann, Jr., and Prof. D. B. Keyes, University of Illinois; T. W. Evans, K. R. Edlund, and M. D. Taylor, Shell Development Co., Emeryville, Calif.; R. D. Snow and F. E. Frey, Phillips Petroleum Co., Bartlesville, Okla.; L. A. Monroe, M. W. Kellogg Co., New York; and E. R. Gilliland, Massachusetts Institute of Technology; Charles L. Thomas and Hans Tropsch of Universal Oil Products Co.; Mr. Russell and Mr. Hottel; Prof. E. F. Degering, Rush F. McCleary, H. B. Hass, and J. A. Patterson of Purdue University.

Doctor Morrell will preside at a general meeting of the division Monday afternoon. Mr. Thomas, Herman S. Bloch, and James Hoekstra of Universal Oil Products Co. will speak on "The Proximate Analysis of Gasoline." R. C. Gunness, Massachusetts Institute of Technology; Joseph D. White and Augustus R. Glasgow, Jr., National Bureau of Standards; R. W. Crary and M. M. Holm, Standard Oil Co. of California, and R. I. Mahan, Union Oil Co., Wilmington, Calif., and J. R. Bailey, University of Texas, will also report research programs.

The divisional dinner will be held on Tuesday evening following a final general session addressed by R. F. Marschner, Standard Oil Co. (Indiana), Chicago, and Doctor Grosse and Doctor Ipatieff.

On September 9 and 10 the division will sponsor a symposium on gaseous combustion jointly with the Divisions of Gas and Fuel and Industrial and Engineering Chemistry.

Cromwell-Franklin Control To Root Petroleum

Root Petroleum Co. of Shreveport, La., has acquired 70 per cent of the outstanding stock of the Cromwell-Franklin Oil Co. D. T. Hamilton, president of Root, assumes the same position with Cromwell-Franklin, and Frank M. Porter, who has been acting general manager, becomes vice president and general manager. Other new officials include H. Carson, vice president; T. D. Beaird, secretary, and L. C. Hallinquist, treasurer, all of the Root company. Wirt Franklin remains a director.

The assets of the Cromwell-Franklin company include an eighth interest in the Moore Community block of northern Cleveland County; a fourth interest in the Trosper Park leases in the Oklahoma City field, and other acreage in that field, as well as some properties in the Edmond field.

Oklahoma Allocations

With the August allowable set at 633,400 bbls., the same as the Bureau of Mines recommendation, and 3,700 bbls. more than the July state figure, the Oklahoma Corporation Commission conservation department allocated the percentage allowable by pools as follows:

Class A pool: Oklahoma City Wilcox zone, 15 per cent.

Class B pools: The following pools, all except four in the group, are permitted to flow at 100 per cent or capacity: Allen, West Allen, Asher, Wanette, Earlsboro, Fish Cromwell, Fish Wilcox, Grayson, Konowa, Little River, East Little River, Maud, Mission, Oklahoma City Cleveland, Olympic, Polo, Sasakwa, Sasakwa Townsite, Searight, North Searight, Seminole City, East Seminole, Seminole proper and others, St. Louis, and Stillwater.

Other class B pool percentages are: Billings Wilcox, 6.75; Jesse, 6.3; Keokuk Falls, 11; and Lucien, 10.

Class C pools: North Bethel, 10; South Britton, 5; Crescent, 3.5; Edmond, 4; Fitts Hunton, 4; Fitts Upper Simpson, 7.9; Fitts Wilcox, 6.25; Langston, 21; North Lucien, 13.5; Saskwa East Wilcox, 14.4; North Wellston, 10; with percentage for the Moore pool to be determined after new bottom-hole tests are taken the first of August.

Louisiana Allowable

NEW ORLEANS, La.—Allowable oil production in the state was increased 700 bbls. per day for August over July in the order issued by William G. Rankin, conservation commissioner.

The increase will bring the total production to 264,550 bbls. daily. There will be a production of 180,050 bbls. daily in southern Louisiana and 84,500 bbls. daily in North Louisiana. The Rodessa field was given total production of 50,000 bbls. per day. In the Evangeline field an increase of 2,250 bbls per day has been allowed, bringing the total production to 10,000 bbls. per day.

"Hot" Oil Decision

AUSTIN, Tex.—The Federal Circuit Court of Appeals at New Orleans has sustained the state's contention that Angus Spear and others should not be allowed to move approximately 102,000 bbls. of crude which the state alleged was produced in excess of allowables. The circuit court reversed a lower court decision.

THE MARKETS*

CRUDE OIL: *Though there is no weakness of consequence in the crude market, some observers predict weakness may easily develop when refiners begin to cut their runs if the present rate of production is maintained. A 15-cent reduction in Midland, Michigan, crude was announced by Pure Oil Co. and a 13-cent reduction in western Kansas by Stanolind Crude Oil Purchasing Co.*

REFINERY: *Movement of gasoline is breaking records in all areas, but irregularity in tankwagon prices in Middle West is preventing higher tankcar prices in interior regions. Prices up in some parts of the eastern territory. Refiners are disposed to hold their heating oils instead of selling at current price levels.*

TANK-WAGON AND SERVICE STATION: *Gasoline advanced at points in Arkansas. Few changes elsewhere.*

FINANCIAL: *New highs were made by a few issues and important advances were recorded by others, largely as result of excellent second-quarter reports. Average of 30 representative oil stocks for week ending July 31: High, 43.27; low, 41.55; close, 42.59. Week ending July 24: High, 43.55; low, 42.18; close, 43.01.*

**Detailed information in market section.*

Would Tax Fuel Oil

HARRISBURG, Pa.—Mayor S. Davis Wilson, of Philadelphia, in announcing his candidacy for governor of Pennsylvania, said: "Next Thursday I propose to inaugurate a 2-cent tax on a quart of fuel oil and on lubricating oil in the city of Philadelphia," adding that these were competitive with anthracite.

Sixteen Dollars a Gallon!

SAN JACINTO, Calif. — Following the Soviet flight from Moscow to San Jacinto, John Matchinoff, who helped in dismantling the craft, was rewarded with the fuel left in its tanks—70 gallons, he said. "I used 10 gallons—its really benzine—in my car. Then I got the idea of selling the fluid as a souvenir." The price was 50 cents for four ounces —or $16 a gallon.

Tidal Lands to Navy?

WASHINGTON.—Passage of legislation adding tidal oil lands off the Southern California coast to the naval petroleum reserves is reported to have been recommended to congress by the navy department. While the interior and justice departments have opposed such action, Secretary Swanson is said to have urged the senate public lands committee to grant a favorable report for a bill sponsored by Senator Nye, Republican, of North Dakota. Under the measure, all land between the low-water mark and the 3-mile limit would be added to the public domain, with mineral deposits closed to exploitation.

California Tax Record

SACRAMENTO, Calif.—A record income from California's motor vehicles fuel tax was achieved during the fiscal year ended June 30, when the revenue passed the $50,000,000 mark for the first time in any 12-month period, the State Board of Equalization announced. The tax amounted to $4,628,691.58 in June, bringing the total for the fiscal year up to $50,086,902.84.

The revenue for the month represented a gain of 11.19 per cent compared with the same month of the previous year.

SPEAKERS' STAND AT GEOLOGISTS CONGRESS, MOSCOW—V. I. Mezhlauk, Peoples Commissar of Heavy Industry; I. M. Goubkin, vice president of Academy of Sciences and president of the Organization Committee of the Seventeenth International Geological Congress; Dr. Phillip Smith, leader of delegation from U.S.A.; and Academician N. P. Gorbunov

International Geologists Open Moscow Meeting

By W. J. KEMNITZER

MOSCOW, U.S.S.R., July 22.—In the presence of over 1,000 delegates and guests representing 50 countries, the Seventeenth International Geological Congress opened in the Large Hall of the Moscow State Conservatory yesterday.

On the platform were Dr. Philip S. Smith, chairman of the opening session and head of the American delegation. Academician I. M. Goubkin and Peoples Commissar of Heavy Industry V. I. Mezhlauk.

About 400 geologists from the principal countries of the world are assembled here. American, English, French and Japanese have the most delegates. America probably leads with 77 actually present. No Germans or Italians attended. Several hundred Soviet geologists in addition to the 400 foreigners are present. All are accorded every courtesy, and given the best of things, although the actual handling of members and the program is a little unwieldy.

The large Soviet State Conservatory auditorium was filled on the opening day (July 21) with delegates and visitors. Here, general assemblies are held, and the exhibitions housed. The attendance and enthusiasm are excellent. The exhibits both in variety and in execution, especially the maps, are comparable to the best.

The Soviet scientists led by Academician I. M. Goubkin are conceded generally as remarkably competent men. Nearly, if not all delegates have been surprisingly impressed by the work done by the Soviet geologists and awed by the variety and amount of mineral resources.

A feature of the conservatory auditorium was the attachment of head-phones to each seat where by means of seven different outlets plugs could be inserted to hear a speech in any one of seven different languages. Thus, Americans could hear Russian speeches in their own tongue, French in theirs, Poles in theirs, etc. A rare event was the presence of and speech by V. I. Mezhlauk, Peoples Commissar of Heavy Industry.

More emphasis is being placed on petroleum than any other phase of geology. Mr. Goubkin, himself is primarily a petroleum geologist. The Japanese are showing much interest in this subject but no more than the Russians themselves.

At the first sectional meeting on petroleum, I counted about 130 present while at the second meeting more than 200 were in attendance. Unfortunately, few Americans were in the petroleum section. R. J. Russell and H. V. Howe of Louisiana State University were the only Americans to deliver papers in this section; most of them were by Soviets.

Section meetings are held in the Academy of Science buildings, several miles from the conservatory, making for some, but not disagreeable, inconvenience.

Kansas Potential Revision to Be Based on Decline Curve

WICHITA, Kans., Aug. 1.—Complete revisions of proration regulations by the State Corporation Commission, including adoption of the composite withdrawal decline curve method of establishing potentials, have been announced by E. G. Dahlgren.

Potentials will be determined on the smaller production of two four-hour periods. The curve will be used in computing potentials between the nine-month intervals when physical tests will be run.

The composite curve is defined as follows:

"A curved line plotted on coordinate paper, projected between the ultimate point on the ordinate, representing a potential of 2,500 bbls. and the ultimate point on the abscissa representing a potential of less than 15 bbls. and declined on the basis of the amount of oil withdrawn from zero to 245,000 bbls.; the degree of decline being fixed by reducing the potential by 50 per cent for each 33,500 bbls. of oil withdrawn from a well where the well spacing in a pool is 10 acres; provided that where the potential of a well is more than 2,500 bbls. the curve shall be extended so as to include each well.

"In applying the said curve to pools where the well spacing is greater or less than one well to 10 acres, the potential or monthly decline of a well shall be computed by adjusting the volume of withdrawal in an inverse proportion to the number of well density acres.

"For example, a 20-acre spaced well when subjected to the curve has only produced one-half of its actual production when its withdrawal is applied to the curve for adjusting potentials.

"The adjusted potential of the well shall be determined after any given volume of withdrawal by reading on the potential scale opposite the point where the line representing the volume of withdrawal intersects the decline curve.

"As an example in applying the curve, a well showing 2,000 bbls. upon its original physical test will take its place at a point upon the curve immediately opposite the 2,000-bbl. point indicated on the potential scale and immediately above the 10,500-bbl. point indicated on the withdrawal scale. After the well has produced 10,000 bbls., its potential will take its place on the curve immediately above the 20,500-bbl. point on the withdrawal scale. The well will thus be assigned a potential of 1,630 bbls."

C. R. FETTKE

Physical Characteris t and Relation

By C. R. FETTKE
Professor of Geology,
Carnegie Institute of Technology

Considerable interest is attached to the Bradford Third sand of the Bradford field because it represents the first sand from which large additional quantities of oil have been obtained by artificially-conducted water drives after the extraction of oil by ordinary production methods had reached the economic limit. Of the 352,700,000 bbls. that the field has produced to the end of 1936, it is estimated that 110,250,000 bbls. have been recovered by water-flooding as distinguished from natural production.

The Bradford Third sand is a member of the thick series of Upper Devonian marine shales, sandy shales, and sandstones of northwestern Pennsylvania. It lies approximately 1,750 feet below the top and 3,100 feet above the base of the series.

The major structural features of the Bradford Third sand in the Bradford district are shown in Figure 1 (page 22). They consist of two asymmetrical anticlines trending northeast and southwest, and converging on the northeast in a broad dome. The anticlines have broad tops with gentle dips toward the northwest and considerably steeper dips toward the southeast. The fact that the major structures, as mapped on the erosion surface at the base of the Olean conglomerate, the lowest member of the Pottsville series of the Pennsylvanian system in the district, are essentially parallel to those mapped on the top of the Bradford Third sand, indicates that the present structural features of the Bradford Third sand were, in part at least, developed in post-Pottsville time.

The Bradford Third sand is a chocolate-brown sandstone composed predominantly of fine to very fine angular quartz grains. Occasionally a few well-rounded pebbles of transparent to milky quartz, up to 3 millimeters in diameter, occur scattered through the sandstone. These are mostly in the upper layers and rarely constitute any appreciable volume of the rock.

In thin section, the sandstone presents an interlocking mosaic of fine to very fine angular quartz grains. A few flakes of muscovite and biotite and an occasional plagioclase grain are present in nearly all thin sections. Some of the mica flakes are bent around the quartz grains. The biotite has in part been altered to chlorite. A small amount of interstitial clay consisting of an aggregate of sericite, kaolin, and a brown material, in part limonite, occurs between the quartz grains, but is not uniformly distributed. Silica, as a secondary crystalline outgrowth from the original quartz grains, and the small amount of clay mentioned form the bond. Calcite only rarely is present in large enough amount to be an important bonding agent. In most thin sections, only one or two grains of calcite can be seen. Occasional small clusters of minute pyrite crystals, clearly of secondary origin, are present. In sections cut perpendicular to the bedding, stratification is frequently faintly indicated by the alignment of the occasional mica flakes and some of the elongated quartz grains parallel to the bedding planes.

A chemical analysis of a typical sample of Bradford Third sand is shown in Table 1. The presence of 0.3 per cent organic carbon after extraction with carbon tetrachloride followed by petroleum ether indicates that not all the petroleum residues were removed by these reagents. The sandstone sample was carefully examined for carbonized plant remains before it was crushed and none were found.

TABLE 1—CHEMICAL ANALYSIS OF BRADFORD THIRD SANDSTONE

	Per cent
SiO_2	86 89
Al_2O_3	6 95
Fe_2O_3 (including FeO)	2 55
MgO	0 42
Alkalies	0 07
H_2O (combined)	0 89
CO_2	Trace
C (organic)	0 30

Texture

Screen analyses of representative samples from different horizons in three cores illustrating three types of conditions that are most frequently encountered in the Bradford field are given in Tables 2, 3, and 4. Core 11 was taken in the central part of the field in an area in which excellent results have been obtained by water-flooding. Core 2 came from the dome in the northeastern portion of the field where the upper part of the Bradford Third sand originally contained considerable volumes of gas and little or no oil. Core 19, from the southern part of the southeastern lobe of the field contains a so-called "loose streak" in its middle portion which possesses a much higher degree of permeability than the average Bradford Third sand.

In the entire Bradford field, the Bradford Third sand is composed of fine to very fine grains. Over considerable areas the different layers that make up the sand body show remarkable uniformity in grain size, similar to that exhibited by Core 11; even in Core 19, which shows the greatest range of the cores studied, the variations between the different layers are not large. The grains of the Bradford Third sand are predominantly angular. In a typical sample about 78 per cent were classed as angular; 12 per cent, subangular; 7 per cent, fairly well rounded; and 3 per cent, rounded. Part of the angularity is due to secondary silica deposited as a secondary

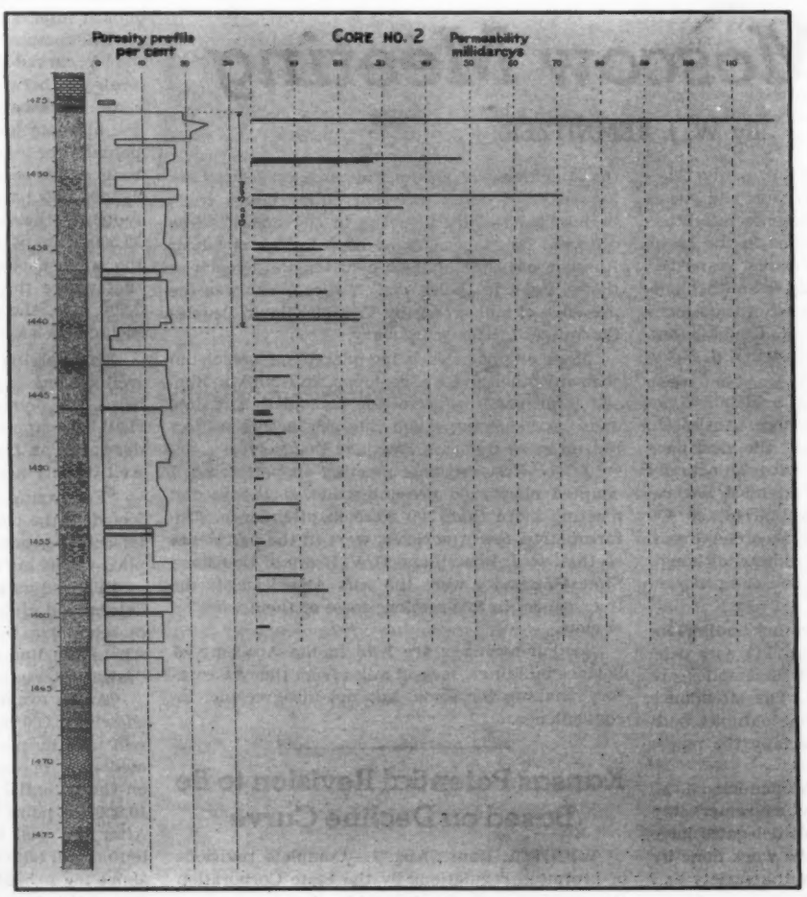


Figure 2

tics of the Bradford Third Sand to Occurrence of Oil

First Article of Series

The increasing interest in secondary recovery gives timely interest and value to the series of five articles prepared by Dr. Charles R. Fettke, professor of geology at Carnegie Institute of Technology, Pittsburgh, Pa., of which this is the initial installment. After publication in The Oil and Gas Journal the Pennsylvania Topographic and Geologic Survey intends to publish the series in book form.

The author graduated from the College of Mines of the University of Washington in 1910 and received a Ph. D. degree from Columbia University in 1914 where he specialized in economic geology, petrology, and physical chemistry. Since 1913 he has been in charge of courses in geology and mineralogy at the Carnegie Institute of Technology. He has held positions as field assistant with Washington State Geological Survey, geologic aid with U. S. Geologic Survey, geologist with the Scientific Survey of Porto Rico and the Virgin Islands, consulting geologist with U. S. Army Engineers, and cooperating geologist with Pennsylvania Topographic and Geologic Survey. Since 1925 he has been making intensive studies of the physical characteristics of the oil sands of western Pennsylvania. He has recently completed a geological survey of the Bradford field.

crystalline outgrowth from the original quartz grains after the sand was laid down.

Porosity

The thickness of oil-bearing sand with a porosity of 10 per cent or more present in each of 21 cores from different parts of the field and its average porosity and, where the sand body can be divided into several distinct parts, similar data for each part, are summarized in Table 5.

A comparison of porosity with grain size indicates that the percentage of fine material, that is, grains that pass through a 325-mesh sieve, is one of the determining factors in the porosity of the sand. The lower this percentage, the higher the porosity, since the fine particles fill the voids between the larger particles and thus reduce porosity. In general, in the Bradford Third sand, the layers with high porosities (more than 20 per cent) consist of coarser grains than the others. The higher porosity is apparently due to the fact that these layers were sorted better during deposition and less silt was deposited in them.

Microscopic examination has revealed that the low porosities of certain of the sandstone layers may be due to three causes: (1) large amounts of interstitial clay minerals; (2) greater percentage of silica deposited as secondary crystalline outgrowth from the original quartz grains and as cryptocrystalline silica; and (3) large amounts of calcite or related carbonates between the quartz grains.

Permeability

Sections and porosity and permeability profiles of the sand, shown in Figures 2, 3, and 4, illustrate three types of conditions that are most frequently encountered in the Bradford field. Core 11 of Figure 3 was taken in a part of the field in which excellent results have been obtained by water-flooding. The additional recovery by water-flooding on this particular tract, which had practically reached its economic limit by ordinary methods, amounted to 7,280 bbls. of oil per acre or 260 bbls. per acre-foot of sand. The permeabilities are relatively low, 9.09 millidarcys being the maximum observed. The outstanding feature, however, is the fact that the permeabilities of each one of the important layers of sandstone comprising the sand body show about the same range of permeability.

Over much of the dome in the northeastern portion of the field, the upper 35 to 40 feet of the Bradford Third sand originally contained considerable volumes of gas and little or no oil. The sand body in much of this area is 90 feet thick. Another similar gas area occurs on the structural nose southwest of Rixford. Here the upper 20 to 25 feet of sand was gas-bearing, the total thickness ranging from 45 to 70 feet. These areas are enclosed in dashed lines in Figure 1. Core 2 of Figure 2 came from the northeastern edge of the first area. Although the gas "pay" in this core contained some oil, the degree of saturation was considerably less than that of the underlying oil "pay." The outstanding feature is the high permeability of the gas "pay" as compared with that of the oil "pay." If this portion of the sand body is not properly packed off, much trouble from by-passing is experienced in water-flooding operations.

In certain parts of the Bradford field, particularly in the eastern lobe, but not restricted entirely to it, there are certain layers in the sand body called "loose streaks," which possess a much higher degree of permeability than the average Bradford Third sand. The layers are also characterized by a slightly coarser texture and possess a higher porosity. Core 18 of Figure 4 shows such a "loose streak." The "loose streaks" present one of the most difficult conditions to contend with in the application of the water drive in the Bradford field. In Core 18, the very permeable layer occurs near the middle of the sand body. They are not necessarily confined to this portion, however. In some places they occur in the upper and at others in the lower part.

Inasmuch as porosity is one of the factors entering into permeability, the permeabilities obtained in the study of the three cores have been plotted against porosities in Figure 5 using log-log coordinates. The median line shown represents the line of best fit obtained by the method of least squares through minimizing the squares of the vertical deviations of the points from this line. In terms of millidarcys, this line gives the following relation between permeability and porosity:

$$K = 5.1 \times 10^{-5} p^{6.9}$$

The graph shows that porosity is one of the important factors in determining the permeability of the Bradford Third sand. It also shows, however, that it is not the only factor. In general, one would expect the sands with the coarser grains to possess permeabilities greater than those indicated by the median line and those with the finer grains, lower. Attention has been called to the fact that, as a general rule, those layers of the Bradford Third sand having the highest porosities are somewhat coarser in texture than the average. On the other hand, layers of relatively low porosity frequently are somewhat finer in texture than the

(Continued on Page 24)

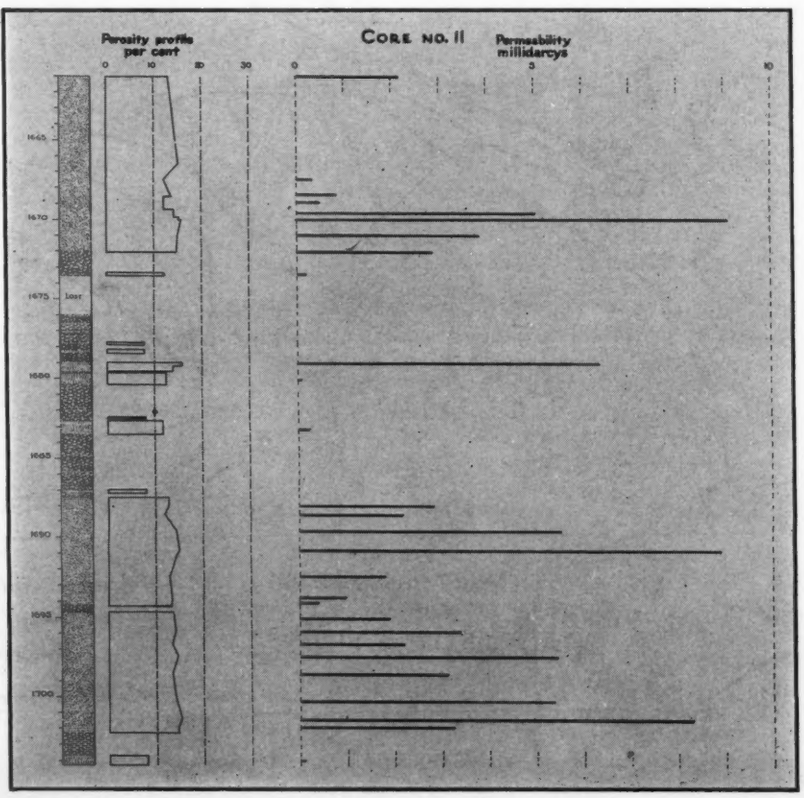
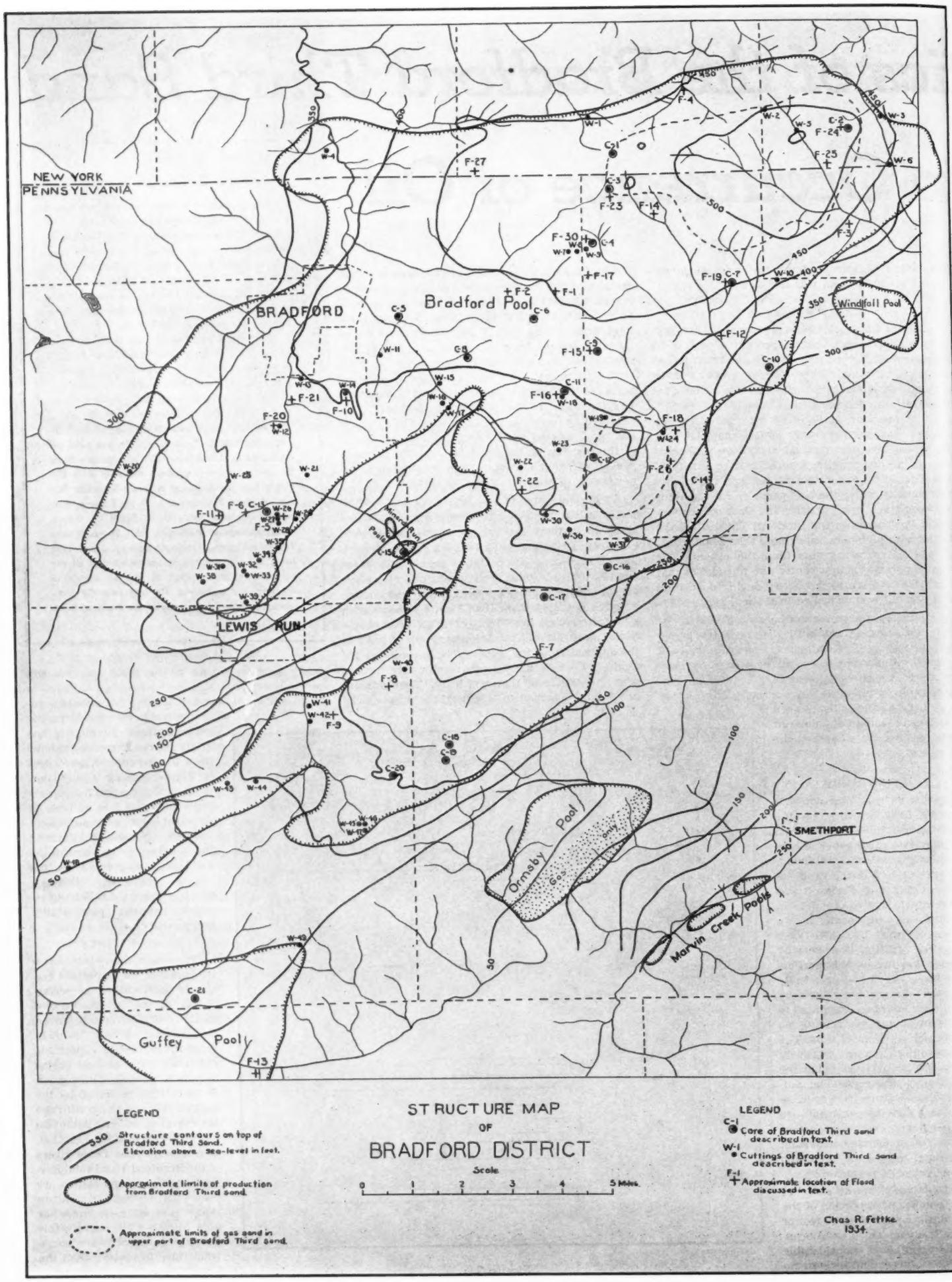


Figure 3


NEW YORK
PENNSYLVANIA
BRADFORD
Bradford Pool
Windfall Pool
LEWIS RUN
Guffey Pool
Ormsby Pool
Gas only
SMETHPORT
Marvin Creek Pools
Kenny Run Pools
LEGEND
Structure contours on top of Bradford Third Sand. Elevation above sea-level in feet.
Approximate limits of production from Bradford Third sand.
Approximate limits of gas sand in upper part of Bradford Third sand.
STRUCTURE MAP
OF
BRADFORD DISTRICT
Scale
0 1 2 3 4 5 Miles
LEGEND
C-1 Core of Bradford Third sand described in text.
W-1 Cuttings of Bradford Third sand described in text.
F-1 Approximate location of Flood discussed in text.
Chas R. Fettke
1934.

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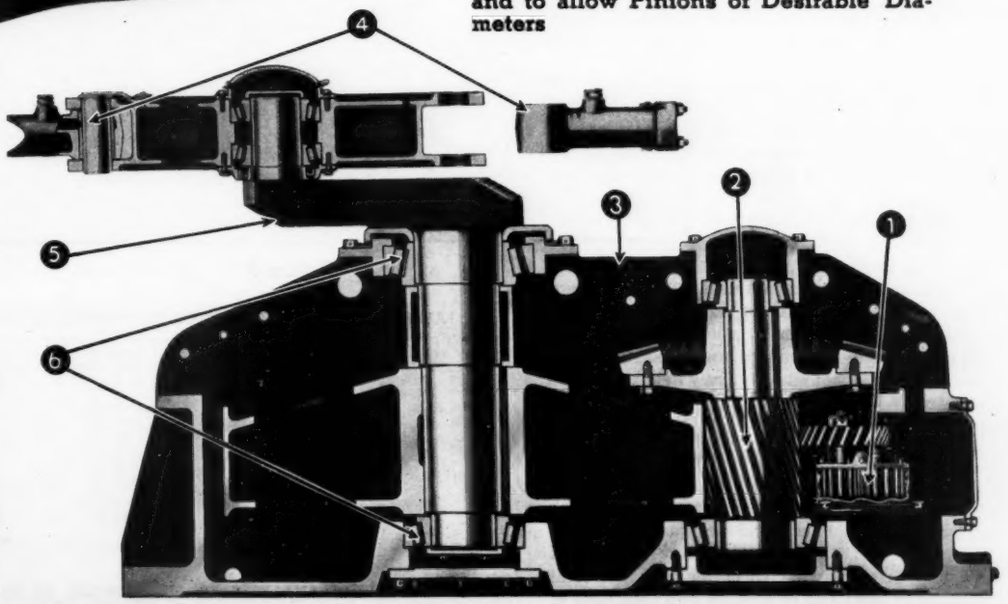

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BRADFORD THIRD SAND

(Continued from Page 21)

average and their permeabilities are, therefore, lower than would be expected from the position of this line. An average Bradford Third sand sample with a porosity of 14.5 per cent should possess a permeability of about 5 millidarcys according to the graph.

Oil Content

The results of oil content determinations on seven cores of Bradford Third sand, taken from areas in which natural production had about reached economic limit but water-flooding had not yet been started, are given in Table 6. These were made by the "retort" method.[1]

Although the core tests give only minimum figures, in estimating oil reserves, the writer is convinced, from numerous core analyses checked against actual production figures, that there is no justification for the assumption that the entire pore space of oil sands in the Appalachian fields was necessarily occupied by oil originally, and that by deducting the quantity of oil already recovered from a particular tract, the remaining reserve can be estimated from the total pore space available in the sand. In Core 9, for example, there is sufficient volume of pore space to have contained 39,360 bbls. per acre. The natural production from this area did not exceed 5,000 bbls. per acre, leaving 34,360 bbls. still to be accounted for if 100 per cent saturation is assumed. The core tests show only 17,535 bbls. or approximately half this amount. It is hardly conceivable that this difference can be accounted for by shrinkage in volume due to loss of gas originally held in solution and losses incurred in the coring operation and the testing of the samples.

Lateral and Vertical Variations

The Bradford Third sand was deposited over a very much larger area than that occupied by the Bradford oil pool. It is in the latter area, however, that the sand is thickest and most continuous. But even in this area, wide variations exist in total thickness of sand and in number and thickness of shale partings.

The greatest thickness of sandstone is in the northeastern part of the Bradford pool in the area occupied by the Knapp Creek dome, shown in Figure 1. Near the head of Indian Creek, the sand body is 118 feet thick and 99 feet of this is sandstone. Here the pores of the upper half of the sandstone were originally filled largely with gas and contain little or no oil. Although over much of this area the sand body has a total thickness of 90 feet, the upper 35 to 40 feet originally contained considerable volumes of gas and little or no oil. The upper or gas-bearing portion of the sandstone is characterized by somewhat coarser grains than the average Bradford Third sand. Slightly coarser layers occur in the underlying oil "pay" also. The upper part of the sand body in most places has a much higher permeability than the lower, being of the magnitude of 120 millidarcys as compared with 5 to 15 millidarcys for normal Bradford Third sand.

To the north, northeast, and southeast of the dome, the sand body thins, the amount of actual sandstone present becomes less and less, and the shale partings increase in number and thickness until, at the margins of the field, comparatively little sandstone remains. To the southwest the sand body has a good development over an area 5 to 8 miles wide for about 6 miles. This includes the north-central part of the Bradford oil pool. The thickness of actual sandstone usually ranges anywhere from 25 to 65 feet. Commonly it is split into a number of distinct layers by shale partings. The individual layers of sandstone show remarkable uniformity of grain size, porosity, and permeability.

West and southwest of Rixford, another gas-bearing zone, similar to the one on the Knapp Creek dome, was found in the upper part of the sand body on a low dome along a structural nose. Here the upper 20 to 25 feet of sand were gas-bearing, the total thickness ranging from 45 to 70 feet.

In the vicinity of Corwins Corners, the belt of thick sand development splits into two lobes. Along the northwest lobe the thick sand continues in a southwest direction for nearly 8 miles over a width of about 3 miles. In total thickness, and in number and thickness of shale partings, it does not differ materially from the sand in the north-central area.

The thick sand in the southeast lobe also trends in a southwest direction but its thickness is considerably more irregular than in the northwest lobe. The thickest sand occurs in two belts, one about 9 miles long

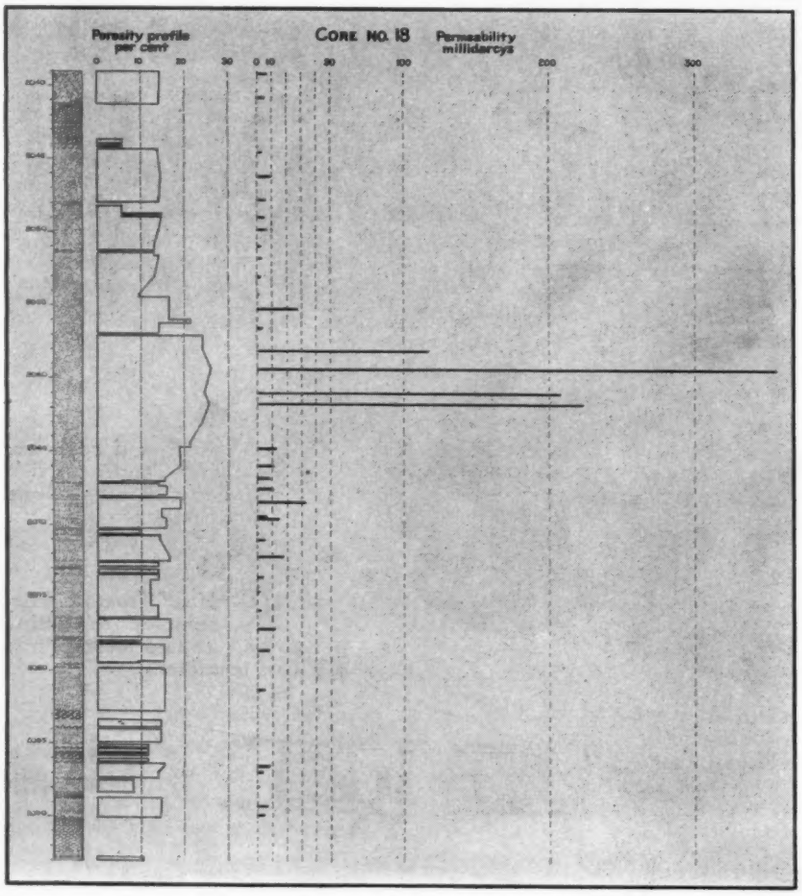


Figure 4

TABLE 2—SCREEN ANALYSES OF SIX SAMPLES OF BRADFORD THIRD SAND FROM CORE NO. 2

Size of openings millimeters		Depth					
Through	Caught on	1,424.95 ft. per cent	1,428.96 ft. per cent	1,441.10 ft. per cent	1,445.30 ft. per cent	1,449.24 ft. per cent	1,460.62 ft. per cent
.589	.417	0 1	0 0	0 0	0 0	0 0	0 0
.417	.295	1 2	0 0	0 0	0.0	0.1	0 1
.295	.208	15 3	8.0	2 3	0.6	5 2	0 2
.208	.147	27 5	41 0	14 2	15.2	21.4	8 8
.147	.104	16 6	30 8	24 6	44.3	31.3	27 8
.104	.074	10 6	7.7	18 9	23.2	18 8	30 6
.074	.061	3.0	1.9	5 5	3.5	4.1	9 1
.061	.043	8 1	3 3	8 5	4.5	6.4	9 3
.043	....	17 5	7 2	26 0	9 0	12 7	14 1
*Avg. grain diam., millimeters		.039	.051	.033	.047	.042	.041
Porosity, per cent		3.8	15.7	2.0	15.7	15.2	13.3

*Represents diameter whose corresponding volume divided into the total volume equals the total number of grains.

TABLE 3—SCREEN ANALYSES OF SIX SAMPLES OF BRADFORD THIRD SAND FROM CORE NO. 11

Size of openings millimeters		Depth					
Through	Caught on	1,666.50 ft. per cent	1,668.91 ft. per cent	1,671.00 ft. per cent	1,689.55 ft. per cent	1,692.40 ft. per cent	1,700.27 ft. per cent
.295	.208	0 1	0.0	0.1	0.1	0.2	0 4
.208	.147	1 2	3 0	3 1	5.5	3.7	6 2
.147	.104	23 7	27.6	26 6	29.3	21 0	25 2
.104	.047	23 6	41.1	41 2	25.1	39.9	40.6
.074	.061	9 2	7.8	8 3	8.4	11 9	8 4
.061	.043	12 4	7 7	9 5	9.3	10 3	8.5
.043	....	13 8	12 7	11 1	12.1	12 9	10 7
*Avg. grain diam., millimeters		.041	.042	.043	.042	.042	.044
Porosity, per cent		15.3	12.1	15.0	14.3	12.8	14.3

*Represents diameter whose corresponding volume divided into the total volume equals the total number of grains.

TABLE 4—SCREEN ANALYSES OF EIGHT SAMPLES OF BRADFORD THIRD SAND FROM CORE NO. 19

Size of openings millimeters		Depth							
Through	Caught on	2,040.59 ft. per cent	2,047.13 ft. per cent	2,051.07 ft. per cent	2,053.07 ft. per cent	2,054.57 ft. per cent	2,058.07 ft. per cent	2,063.56 ft. per cent	2,067.04 ft. per cent
.589	.417	0 0	0 0	0 0	0 1	0.0	0.1	0 0	0 0
.417	.295	0 0	0 1	0 0	0 5	0 1	0.1	0.0	0.0
.295	.208	0.1	1.9	0 9	7 7	3 9	3.5	0 1	3 2
.208	.147	5 5	35 9	30 5	50 3	19.5	24.7	12 0	13.8
.147	.104	36 1	45 6	47.1	30 1	31.1	35.4	43.8	26.5
.104	.074	35 4	10 2	14.1	6 3	24.9	20.3	29 2	32.1
.074	.061	5 2	1.2	1.3	0 8	4 5	3.3	3 2	6.4
.061	.043	7 3	1.8	2.0	1.5	6.0	5.6	4.8	7.0
.043	....	10.4	3.1	3 9	2.6	9.8	7.1	6.7	10.9
*Average grain diam., millimeters		.044	066	06	.070	.046	.051	.052	044
Porosity, per cent.....		13.4	23.3	21.7	22.7	16.8	15.1	16.2	15.5

*Represents diameter whose corresponding volume divided into the total volume equals the total number of grains.

[1]Charles R. Fettke, Core Studies of the Second Sand of the Venango Group from Oil City, Pa., Petroleum Development and Technology in 1926, A.I.M.E., page 229, 1927.

and 1 mile wide along the northwest flank of the lobe, and another approximately 8 miles long and 1 mile wide along its southeast flank. An intervening belt of thinner sand about 1 mile wide separates the two.

TABLE 5—AVERAGE POROSITIES OF BRADFORD THIRD SAND FROM 21 CORES

Code number—	Thickness of oil-bearing sand present, feet		Average porosity, per cent	
1. Entire sandy body	23.00		13 4	
Gas "pay"		7.50		14.4
Oil "pay"		15.50		12.9
2. Entire sand body	33.44		15 0	
Gas "pay"		13.27		16 7
Oil "pay"		20.17		13 9
3. Entire sand body	40.40		14.5	
Gas "pay"		6 30		15 6
Oil "pay"		34.10		14.3
4. Entire sand body	40.01		14 8	
5. Entire sand body	44.46		13 9	
Top "pay"		16.18		13 9
Shale parting		5 26		12 2
Bottom "pay"		23 02		14 0
6. Entire sand body	28 04		14 6	
7. Entire sand body	34.98		13 9	
8. Entire sand body	15.16		15 9	
9. Entire sand body	36 49		14.1	
Top "pay"		24 57		14 4
Shale parting		.71		12 1
Bottom "pay"		11.21		13.7
10. Entire sand body	16.01		13.8	
11. Entire sand body	27.59		14.1	
Top "pay"		11.08		14.2
Shale parting		2.00		11.7
Bottom "pay"		14.51		14.4
12. Entire sand body	40.17		17.0	
Gas "pay"		10.19		16.4
Oil "pay"		29.98		17.2
13. Entire sand body	38.14		14.8	
14. Entire sand body	8.00		14.9	
15. Entire sand body	5.30		15.5	
16. Entire sand body	28.19		16.4	
17. Entire sand body	21.27		14.8	
18. Entire sand body	41.79		16 4	
Upper portion		13 64		14 1
Middle portion ("loose streak")		9.97		22 8
Lower portion		18 18		14.7
19. Entire sand body	43.81		15.4	
Upper portion		18.26		12.7
Middle portion ("loose streak")		7.44		23.3
Lower portion		18.11		14.9
20. Entire sand body	23 52		13 8	
21. Entire sand body	28 50		12 8	

Over portions of the southeast lobe, the characteristics of the sand body are very similar to those in the north-central area and the northwest lobe. At several localities, however, there are elongated bodies of relatively thick sandstone containing few or almost no shale partings, on the sides of which the sand thins rapidly and has numerous shale layers interfingering with it. Some of the larger elongated bodies are 8,000 feet or more in length and 1,200 to 1,500 feet wide. Most of them are smaller and the ratio of their length to width is greater. In many places the trend of the longer axis of these sand bodies is roughly parallel to the axis of the lobe. Porosities in excess of 20 per cent, as compared to 14 to 16 per cent for normal Bradford Third sand, are common, and permeabilities in some places run up to 350 millidarcys. Elongate bodies of sandstone of this type are not confined to the southeast lobe but they are more common along it than in other parts of the field. A belt 2½ to 3 miles wide, in which the Bradford Third sand is very thin or practically absent, separates the northwest and southeast lobes.

Toward and along the margins of the Bradford pool, the shale layers interbedded with sandstone increase in thickness and the sandstone layers become thinner and fewer. Away from the pool only one or two comparatively thin lenses of sand are usually present at the Bradford Third horizon, and in some places the development of sand is so insignificant that its presence is not recognized by the drillers, and other sandstones above or below it are sometimes taken for it. The thinning in most places is more gradual on the northwest side than on the southeast. To the northwest, however, typical chocolate-colored Bradford Third sand disappears from this horizon a short distance beyond the limits of the pool, but to the southeast and east it can be traced at least as far as southeastern McKean County and northwestern Potter County.

To the northeast, the Richburg sand, the productive horizon of the Richburg oil pool of southern Allegany County, New York, probably lies at the same stratigraphic horizon as the Bradford Third sand. The sand in this pool is very similar to that in the Bradford pool, but the area is smaller.

South of the Bradford pool, the sand is well developed in the Guffey pool along Kinzua Creek and in the Burning Well pool 2 miles east of Kane. This is as far south as the writer has traced the Bradford Third sand. In the Kane pool proper, this sand is either poorly developed or absent. No sand was observed at its horizon in the Kane deep well. Whether the Third Bradford sand, which yields gas farther south and southwest, occurs at the same stratigraphic horizon as the Bradford Third of the Bradford district, has not yet been definitely established.

Conditions of Sedimentation

The presence of a very fossiliferous cap rock immediately above the Bradford Third sand and the sporadic occurrence of well-preserved marine fossils throughout the entire thickness of the sand body itself, indicate that the sand was deposited under marine conditions.

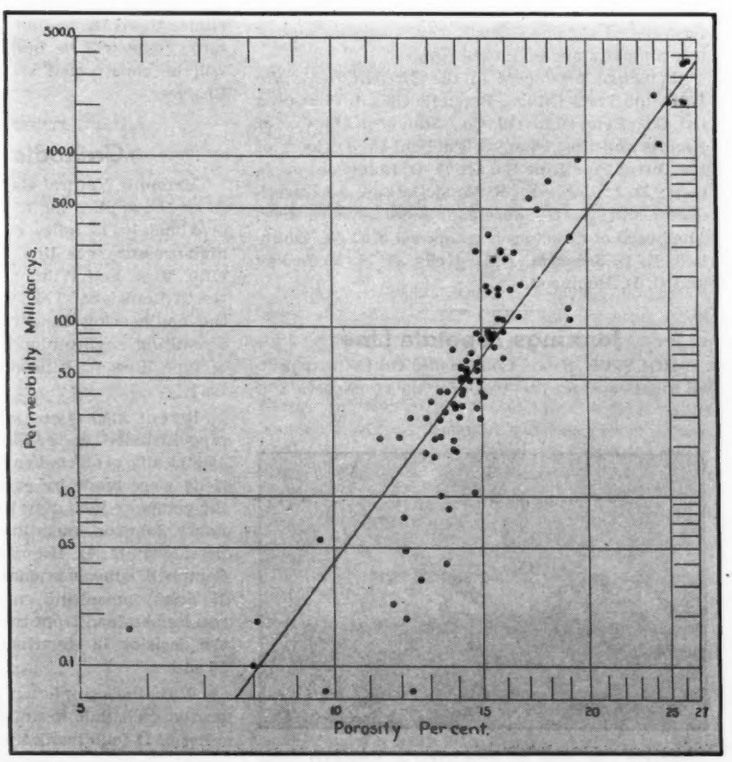


Figure 5

When the sand was laid down, a shallow Upper Devonian sea covered the area. The shore line of this ancient sea probably was no very great distance to the east and southeast of the district. Streams, rendered sluggish by having to flow across a broad, low-lying coastal plain that bordered this sea on the east, washed into it relatively fine sediments, including fine sand, silt, and clay. The sand accumulated in greatest volume opposite the mouths of the larger streams while the finer material was washed farther out into the sea.

TABLE 6—OIL CONTENT PER ACRE OF BRADFORD THIRD SAND SHOWN BY SIX CORE ANALYSES

Code number and portion of sand included—	Thickness in feet	Average total porosity per cent	Average saturation per cent	Oil content per acre bbls.
Core 2:				
Gas "pay"	13.27	16.7	12.5	2,150
Oil "pay"	20.17	13.9	29.0	6,310
Core 3:				
Gas "pay"	6.30	15.6	20.0	1,525
Oil "pay"	34.10	14.3	36.3	13,730
Core 9:				
Top "pay"	24.57	14.4	46.5	12,765
Botton "pay"	11.21	13.7	40.0	4,770
				17,535
Core 17:				
Entire sand body	21.27	14.8	42.7	10,430
Core 19:				
Upper portion	18.26	12.7	43.0	7,735
Middle portion ("loose streak")	7.44	23.3	39.0	5,245
Lower portion	18.11	14.9	50.0	10,470
				23,450
Core 21:				
Entire sand body	28.50	12.8	43.0	12,170

Waves and shore currents also played an important role in further sorting the sand from the silt and clay, and in distributing it more widely over the shallow sea floor near the shore. The positions of the mouths of the streams that brought in the sediments, the configuration of the sea floor, tidal currents, and the direction and strength of the littoral currents all were factors in determining the distribution, size, thickness, and trends of the sand bodies as they occur today.

Relation of Oil Accumulation to Physical Characteristics and Structure

It has been pointed out that an area of thick sand development at the Bradford Third horizon coincides very closely with the outlines of the Bradford pool. This occurrence was a factor of major importance in the accumulation of the Bradford oil pool, although no doubt the structural features also were important factors in the migration of the oil to its present position, the outlines of the pool conforming as closely to the structure as the sand conditions permit.

It must also be remembered in the above connection that much of the oil may have entered the reservoir prior to the close of the Mississippian period when the present structural features did not exist. At the extreme northeast edge, production terminates at the 450-foot contour, while at the extreme southwest tip of the southeastern lobe, the top of the sand is only 40 feet above sea level. At the close of the Mississippian period, this difference was probably only 100 feet instead of 400 feet.

In the northwestern lobe, production on the northwest extends to the axis of the West Branch syncline, but on the southeast it does not extend far beyond the axis of the Bradford anticline. Similarly production along the southeastern lobe extends to the axis of the Big Shanty syncline on the northwest but terminates at a considerable elevation above the axis of the Ormsby syncline on the southeast. In the nonproductive area on the southeastern flank of the Bradford anticline, between the two lobes, where some of the steepest dips in the field occur, the Bradford Third sand is thin and interstratified with numerous shale layers.

(Continued on Page 35)

Natural Gas News

Pennsylvania Gas Hearings

HARRISBURG, Pa.—As part of its investigation of the entire industry, Pennsylvania's new Public Utility Commission has announced it will hold hearings for 22 natural gas companies during September. The commission indicated the hearings would extend to 104 companies serving 750,000 customers in 30 counties.

In notifying the companies, the commission stated that, under the new utility law, temporary rates are being considered where evidence of excessive earnings would be found.

Hearings already scheduled follow:

September 1, at Ridgway for St. Mary's Natural Gas Co., Ridgway Natural Gas Co., Clarion Natural Gas Co., James City Gas Co.

September 2, at Bradford for United Natural Gas Co., Crosby Natural Gas Co., Citizens Gas Co., Finnessy & Co.

September 3, at Bradford for Smethport Natural Gas Co., North Penn Gas Co., Dempseytown Gas Co., Alum Rock Gas Co., Allegany Gas Co.

September 15, at Pittsburgh for the Equitable Gas Co., Duquesne Natural Gas Co., Ambridge Gas Co.

September 16, at Pittsburgh for Manufacturers Light & Heat Co., Union Heat & Light Co.

September 17, at Pittsburgh for Peoples Natural Gas Co., T. W. Phillips Gas & Oil Co., Acme Natural Gas Co.

Report of Helium in Mexico

WASHINGTON, D. C.—Representative O'Connell of Rhode Island told the house naval committee he had "authoritative" information that Germany was planning to establish a colony in Mexico to develop helium and mineral resources. Mr. O'Connell said an American had learned of the existence of helium in Mexico and had tried to work out an agreement with the Mexican government for production of the gas for commercial aviation. Later the same man communicated with German authorities, Mr. O'Connell said.

Mr. O'Connell said Germany subsequently began negotiating directly with Mexico to acquire the gas and planned to send colonists to the area.

Laclede Valuation

KANSAS CITY, Mo.—An order of the Missouri Public Service Commission fixing the valuation of Laclede Gas Light Co. in St. Louis at $39,000,000 and calling for a 6 per cent reduction in gas rates, was affirmed by the Missouri Supreme Court in an opinion prepared by Judge George R. Ellison.

An impounded fund of about $800,000 is to be returned to about 180,000 St. Louis gas customers. Affirmation of the commission's fair value upholds a 6½ per cent rate of return on the figure fixed by the commission.

The order of the commission fixing the $39,000,000 valuation was issued November 30, 1934. The company sought a valuation of $50,000,000, while the city of St. Louis asked a fair value of $27,000,000. After the order the company and the city of St. Louis both appealed to the circuit court of Cole County on the ruling. The circuit court upheld the commission and the supreme court has affirmed that ruling.

In October, 1925, a valuation of $45,600,000 was placed on the Laclede property. Two years later the commission fixed a fair value of $47,000,000 and from this valuation the company appealed. The new valuation is a result of that appeal as the supreme court disapproved of the $47,000,000 figure and remanded the case back to the commission for further hearings.

Odorizing Regulations

AUSTIN, Tex.—The Texas Railroad Commission issued an order promulgating rules for injection of malodorants in gas sold for private and commercial use and specifications for butane gas plants as required by a statute enacted after the London School explosion disaster.

Chairman C. V. Terrell said the rules do not require odorization of gas used in natural gasoline extraction plants, carbon black plants, gathering lines, or gas used in lease and field operations or repressuring.

The order directs that the malodorant used shall be harmless and neither toxic nor nauseating, noncorrosive to steel, iron, brass, bronze or leather, and insoluble in water, but must be of distinctive odor to indicate presence of gas in concentrations not greater than one-half of 1 per cent by volume, and in natural gas to indicate concentrations not greater than 1 per cent by volume.

Companies were directed before installations to submit plans and specifications to the commission describing the equipment to be used for introducing the malodorants. In cases where odorization was practiced before the order, it was required that details of the method be submitted for approval. Three days of notice was required sent to every consumer before introduction and use of malodorants. After 120 days of operation the companies shall furnish the commission a report on results of the first 60 days of odorization. All equipment in storing and dispensing the gas for industrial, commercial, domestic and other uses shall conform with regulations published by the National Board of Fire Underwriters.

Lone Star Gas Ruling

WASHINGTON, D. C.—The Securities Commission has authorized Lone Star Gas Corp. of Delaware to borrow $10,000,000 and permitted Lone Star Gas Co. of Texas to borrow $6,000,000.

Ruling on a request of the Oklahoma Corporation Commission that nothing be done to affect a judgment which ordered Community Natural Gas Co., a Lone Star subsidiary, to distribute a $168,901 rate reduction to its customers, the S.E.C. decided the loans would not interfere with the judgment.

The loans, intended primarily for refinancing old obligations, were allocated to the following banks: Union Trust Co. of Pittsburgh, $9,120,000; Chase National Bank of New York, $4,000,000; Mellon National Bank of Pittsburgh, $1,600,000; Farmers Deposit National Bank, $960,000, and the Union Savings Bank of Pittsburgh, $320,000.

Pipe Line Activity

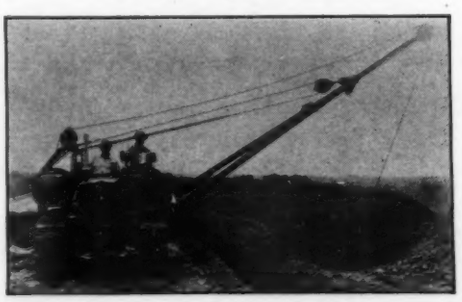
Duval Pipe Line

PITTSBURGH, Pa.—The Duval Pipe Line Co., incorporated in Delaware with a capitalization of 1,000,000 shares, will build a 68-mile pipe line to move crude oil from the North and South Sweden fields in Duval County, Texas, to Republic Oil Co. terminal at Corpus Christi, Tex. Headquarters of the company are in Pittsburgh.

Principal producers in the Sweden fields are Benedum-Trees Oil Co., Republic Oil Co., Hiawatha Oil Co., Penn-Ohio Oil Co., Standard Oil Co. of Kansas and the Arkansas Fuel Oil Co. Officers of the Duval Pipe Line Co. are O. D. Robinson, president; D. D. Johnson, S. H. McCaskey, vice presidents, and W. H. Moreland, secretary-treasurer. The board of directors is composed of C. W. Campbell, D. D. Johnson, E. B. Kelly, S. H. McCaskey and O. D. Robinson.

Jennings-Tepetate Line

HOUSTON, Tex.—Continental Oil Co. is expected to let contract this week for the construction of an 11-mile 6-inch welded oil line from the Old Jennings field in Acadia Parish, Louisiana, to its tank farm at the Tepetate field to the northeast, where the oil will be moved from the field through its 6-inch welded line to its terminal at Lake Charles. The project will cost an estimated $150,000 and includes the construction of four 80,000-bbl. storage tanks. One will be built at Tepetate while three will be constructed at its terminal site at Lake Charles.



Looping the line of Panhandle Eastern Pipe Line Co.

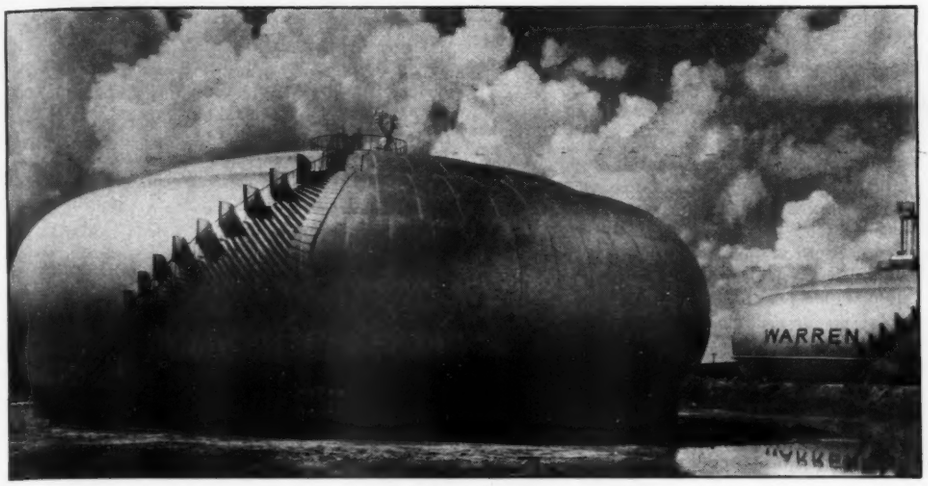
Cathodic Protection

Memphis Natural Gas Co. began work on July 26 on the application of cathodic protection of approximately 15 miles of 18-inch Dresser coupled high-pressure gas line in the vicinity of Greenville, Miss., and Wilmot, Ark., and extending into North Louisiana. This work is being done under the engineering supervision of Robert J. Kuhn, consulting engineer on electrolysis and corrosion of pipe lines with headquarters in New Orleans, La.

Recent inspections were made of a section of pipe installed in the line in a section that was electrically protected two years ago. These inspections were made by executives and engineers of the company including Birger Johnson, president; Larry Johnson, metallurgist; H. C. Wallace, vice president; M. B. Higman, chief engineer; L. W. Campbell, superintendent of pipe lines, and Robert J. Kuhn, consulting engineer on corrosion. The results obtained from the initial installation led to the decision to electrically protect the additional 15 miles.

With the completion of the protection on the present schedule, a total of 66 miles of the 200 miles of 18-inch trunk line will be cathodically protected. Purchased electric power is used on all the protection installations on this line.

Natural Gasoline



New 100,000-bbl. spheroid built for the Warren Petroleum Co. at Port Arthur, Tex. It will be used to store natural gasoline and has a 15-pound working pressure. A similar tank was recently built for the Magnolia Petroleum Co. at Beaumont, Tex.

C.N.G.A. Holds Monthly Meeting

LOS ANGELES, Calif.—Discussing one of the most revolutionary of future flying plans, J. Caden Jenkins, aeronautical engineer for the Lockheed Aircraft Corp., lectured to a large attendance when he spoke on "Substratosphere Flying" before the California Natural Gasoline Association at the Pacific Coast Club, August 5.

Mr. Jenkins' subject embraced the hopes of the entire aviation industry for increased efficiency in flying at high altitudes, and he covered the ground thoroughly, beginning with the first experiments in the field, outlining present developments and giving a prospectus of the hopes and probabilities in the field during the next decade.

Routine business followed the dinner meeting under the direction of Jess C. Burks of the O. C. Field Gasoline Corp., president of the association.

Plan East Texas Plant

SHREVEPORT, La.—Construction of a gasoline plant in the Joaquin area of Shelby County, Texas, to take production from its gas-distillate producers is being planned by Portex Oil Corp. of Portland, Ore.

The company, which recently took over active operation of its holdings, formerly in charge of H. A. Stebinger, has led development activity in this section, opening a Trinity gas pool last year. Type and capacity of the projected plant has not been announced.

Plant Enlargement Completed

SHREVEPORT, La.—United Gas Public Service Co. is now conducting tests and preparing to begin operations of its newly enlarged absorption gasoline plant in the Cotton Valley field of North Louisiana. The plant will handle gas from both the low-pressure oil wells in the shallow sands, and high-pressure gas from the gas-distillate producing wells in the 8,100-foot horizon. Total plant capacity after the recent enlargement will be 30,000,000 feet daily.

Rule Against Open House

The board of directors of the Natural Gasoline Association of America has asked its members, oil companies and equipment companies, to refrain from holding "open house" in the hotel rooms during the conventions of the association over the future. This move has been under consideration for a long time and was taken at this time so that the original purposes of the association may be carried out; namely, that the entertainment expense of the conventions be held to a minimum and so that all available time of its attendants be available for the technical and operating sessions of the convention.

Rodessa Carbon Black Plant

SHREVEPORT, La.—The Arkansas Board of Conservation has granted permit for the construction of a carbon black plant in Southeast Arkansas adjacent to the Rodessa field. State Senator H. M. Barney of Texarkana took the permit on behalf of eastern capitalists, he stated. Tentative plans call for using gas from the Louisiana side of the Rodessa field.

Refinery Projects

To Erect New Unit

LOS ANGELES, Calif.—General Petroleum Corp. of California has started the construction of a new straightrun refining unit at its Torrance refinery. At an expenditure of $850,000, the addition will be made to increase crude-oil refining capacity by between 15,000 and 17,000 bbls. per day. The unit will be designed specially for Wilmington crude. The company's construction department will erect the principal portion of the unit, but the Fluor Corp. will build a cooling tower and other items at the location.

Sunray Starts New Unit

The Sunray Oil Co. has completed its current refinery modernization program at its Allen, Okla., plant and has placed its Dubbs cracking unit on stream. The plant had been operating with the conventional skimming equipment and with one Dubbs cracking unit. The revamped plant includes the operation of a second Dubbs unit and use is made of the heat from the cracking equipment to carry out the initial distillation of the crude. The plant operates on crude produced in the local Allen field and the gasoline made from this crude has a relatively high antiknock value. With the addition of the second cracking unit, the entire motor fuel production from the refinery has a high octane rating.

Leonard Organizational Changes

ALMA, Mich.—Organizational changes in Leonard Refineries, Inc., have just been completed, with J. W. Leonard, Jr., of Mount Pleasant, named to the double position of chairman of the board and president of the corporation. B. M. Jones of Mount Pleasant was named vice president and secretary, and Reid Brazell of Alma was promoted to the rank of vice president and general manager. I. C. Bradbury of Grand Rapids is treasurer, and William H. Watkins is assistant secretary-treasurer. Besides Messrs. Leonard, Jones, Brazell and Bradbury, the directorate includes Grant L. Cook.

Development of the company's Alma refining plant is progressing, with its crude supply carried to the refinery from the Buckeye field by the newly organized McClanahan-Leonard Pipe Line Co.

Test Runs Completed

HOUSTON, Tex.—Atlantic Refining Co. has completed a series of test runs at the new 18,000-bbl. $5,000,000 refinery at Atreco, Tex. The plant, located on the navigable Nueces River between Beaumont and Port Arthur, will be on routine operation by the end of this week, it is expected. The refinery combines selective cracking and polymerization in producing high-octane gasoline, fuel oil and furnace oils. It is located at the terminal of two Atlantic pipe lines, one from East Texas and one from West Texas.

Gulf Iso-Octane Unit

HOUSTON, Tex.—Plans are being perfected for the design of the new iso-octane unit to be constructed at the Port Arthur refinery of the Gulf Oil Corp. The Lummus Co. has the contract for the installation, and is collaborating with Gulf and other engineers in designing the plant. It will produce iso-octane by direct synthesis from di-isobutene, and will have a capacity of approximately 2,000 bbls. per day of charge. The unit will be completed and placed on stream some time next spring. Meanwhile, work is progressing on the 3,000-bbl. vacuum lube rerun unit at the same refinery. Initial operation is expected in September.

Asphalt Conference

Highway engineers seeking means for providing more improved mileage for motorists, and representatives of the petroleum industry pointing to asphalt as the solution to many of their mutual problems will meet in Glacier National Park, Montana, September 7, 8 and 9.

The Montana conference will be combined with the National Road Oil and Asphalt Congress, which for several years has been sponsored through the Western Petroleum Refiners Association.

That the highway engineer is turning more to the asphaltic type of highway is indicated in reports of the U. S. Bureau of Mines of an increase of more than 30 per cent in asphalt consumption in 1936 compared with 1935.

Last year the meeting at Glacier Park attracted engineers and highway builders from 26 states and two provinces of Canada. This year every state has been asked to participate. Material will be submitted by representatives of some 30 or 35 states, together with the U. S. Bureau of Public Roads and asphalt producers. In the conference sessions, however, only four papers will be presented, but those four will combine, summarize and analyze the individual papers submitted.

Oil News from Foreign Lands

Supervision in Argentina

Establishment of government supervision over all phases of the petroleum industry in Argentina is gradually spreading. In one of the recent official decrees the maximum price for fuel oil in small quantities is fixed at 45 pesos per metric ton at the government (Y.P.F.) refinery at La Plata. The price does not include packing, freight or other charges incidental to delivery of the material.

Drilling is under way by the Y.P.F. near Coyle, south of the Comodoro Rivadavia field, on acreage taken over this year from a subsidiary of the Texas Co. The Texas subsidiary withdrew from operations after Y.P.F. disputed title to the land.

All of the Argentine Patagonia not actually exploited by some of the companies operating in the country now constitutes a government oil reserve, and no new exploitation by private companies may be attempted. Reports from official sources show last year's production by Y.P.F. at 1,140,188 cubic meters. The Y.P.F. now operates five refineries and 18 bulk plants. The company operates 5,500 dispensing pumps and controls 1,800 other outlets.

The Argentine government oil fields department employed 5,957 workmen and 2,476 persons in the administrative offices at the start of this year. The department, which functions through Y.P.F., recently issued a pamphlet in the form of fundamental educational sketches, photos and text apparently designed to acquaint natives with its activities.

Stocks and production of petroleum products in Argentina during May are shown in the following table:

(Figures in cubic meters)

Products—	May 31 stocks	May production
National Petroleum	182,541,822	.....
Foreign petroleum	60,929,693	.....
Fuel oil	308,412,178	120,327,519
Diesel oil	24,835,917	13,208,901
Gas oil	31,004,229	26,369,160
Asphalts	3,671,753	2,702,726
Lube oils	22,020,838	5,113,958
Gasoline	90,107,558	90,131,340
Aviation gasoline	1,184,107	862,702
Kerosene	26,629,733	13,120,445
Turpentine	630,226	256,529

To Explore Afghanistan

In fulfillment of concession terms between the Kingdom of Afghanistan and Inland Exploration Co., a subsidiary of Seaboard Oil Co. of Delaware, the American concern is assembling a staff of geologists, geophysicists and engineers. Dr. Hubert G. Schenck, who has been granted a leave of absence as associate professor of paleontology at Stanford University, to join Amiranian Oil Co. and Inland Exploration Co., will follow his assignment in northern Iran with a trip to Afghanistan. Several other geologists, engineers and geophysicists, partly from Seaboard's American staff, have been sent to Iran and Afghanistan. The exploration staff in the two countries where Seaboard subsidiaries were granted concessions early this year is being increased at frequent intervals.

By terms of the Afghanistan concession, April 20, 1937, Inland Exploration Co. obligated itself to start geological and geographical work within six months. The preliminary exploration work must continue without interruption for at least six months. At the end of a year, Inland Exploration must make a selection of not more than five provinces in which it will be permitted to continue exploration. By June, 1939, Inland must start at least one drilling rig and must have three drilling units in operation by 1942. Drilling operations are to be continued with due diligence until wells have attained a depth of not less than 3,000 feet, unless commercial production is encountered or conditions preclude possibility of finding oil. A royalty interest of four shillings per ton is retained by the Afghan government. In addition, Inland Exploration must pay the government 20 per cent of net profits, if the profit exceeds 5 per cent on invested capital.

By sending Doctor Schenck and Linn M. Farish, drilling superintendent, to Iran before they continue to Afghanistan, it is assumed Seaboard's subsidiary in northern Iran, Amiranian Oil Co., probably will precede its Afghanian affiliate in launching a drilling program. Mr. Farish is scheduled to reach Iran about September 1 after attending the International Geological Congress, Moscow.

Results of the exploration work in Iran and Afghanistan will determine whether Iranian Pipe Line Co., a third eastern subsidiary of Seaboard Oil Co., will construct a pipe line south to the Indian Ocean. A concession permitting construction of the line through Afghanistan and Iran is now held by the Seaboard subsidiary, use of which will be determined by the results of geological investigation and drilling, if the project reaches this stage.

Concession in Kenya

D'Arcy Exploration Co. and Anglo-Saxon Petroleum Co., jointly, have been granted an exclusive license by the government of Kenya, to conduct preliminary exploration work over an area of 115,000 square miles.

The license, which is only concerned with the preliminary exploration of the area, is for a period of two years ending in February, 1939, and is subject to the provisions of the Kenya oil production ordinance and regulations as to the prosecution of geological and geophysical research and reporting all the results of the work to the government.

Colombia and Peru

Crude production in Colombia continues to exceed last year's output by a substantial margin, but in Peru the yield is gradually losing some of the ground gained earlier in 1937 and at the end of June was only 116,192 bbls. above 1936.

In contrast, Tropical Oil Co., producing subsidiary in Colombia of International Petroleum Co., has produced 9,971,379 bbls. for the first half of 1937 compared to 9,262,279 bbls. for the same period in 1936, a gain of 709,100 bbls. Tropical produced 1,724,173 bbls. of crude in June, the highest monthly output since May, 1934, when production was a little over 1,730,000 bbls.

International Petroleum Co. production in Peru has been above 1936 output consistently during the first half of this year, but fluctuations in the output of Cia. Petrolera Lobitos and by Zarritos (F. G. Piaggio Soc. Ltda.) has cut into the general increase. Lobitos production has been nearer its 1936 level than Zarritos.

Including production by Lobitos, and Zarritos in addition to International's output, Peru has produced 8,601,915 bbls. for the first six months, a gain of 116,192 bbls. over first half of 1936 when yield totaled 8,485,723 bbls.

International alone produced 1,217,028 bbls. in June and a total of 7,366,806 bbls. for the first half of the year. In 1936, International produced 1,262,543 bbls. in June and 7,255,237 bbls. for the first half. The gain for the first half of 1937 was 111,569 bbls., leaving less than 5,000 bbls. of the total increase supplied by Lobitos.

The production record by Tropical Oil Co. in Colombia for the first half of 1937 and 1936 is shown in the following table:

Month—	1937	1936
January	1,668,490	1,611,618
February	1,617,441	1,475,403
March	1,622,226	1,619,620
April	1,660,469	1,427,193
May	1,678,580	1,598,544
June	1,724,173	1,529,901
Six months	9,971,379	9,262,279
1937 inc.	709,100	.....

The following table shows six months' production from Peru with Lobitos and Zarritos included with International figures:

Month—	1937	1936
January	1,469,460	1,397,734
February	1,339,236	1,311,618
March	1,484,491	1,371,543
April	1,432,874	1,424,570
May	*1,448,436	1,515,400
June	*1,427,418	1,464,858
Six months	8,601,915	8,485,723
1937 inc.	116,192	.....

*Lobitos and Zarritos production for May and June, 1937, estimated.

Experimental oil field at Birmingham University, England

ENGINEERING AND OPERATING SECTION

Presenting modern developments in operation of producing properties, refineries and gasoline plants, and pipe lines, including petroleum research in the field and laboratory

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BUTANE USED TO COOL ABSORPTION OIL IN CARTER'S FITTSTOWN PLANT—By D. H. Stormont ..... Page 30

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APPLYING THE BASIC MECHANISM OF SOLVENT REFINING—By John W. Poole ..... Page 32

In applying the principles of solvent refining to continuous operation care must be taken to preserve proper operating conditions. Influence of raw stock on the oil phase is discussed and also effect of dissolved hydrocarbons.

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California in the past has been the largest producer of naphthenic base oils although the percentage of this type oil has decreased since 1927. Activity in various fields has caused great change in properties of crudes produced in that area.

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CEMENT OFF WATER IN RAINBOW FIELD TO INCREASE PRODUCTION—By Mitchell Tucker ..... Page 45

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ELECTRIC POWER FOR OPERATING OIL FIELD WATER SYSTEMS—By K. K. Kreamer ..... Page 49

An unfailing water supply is of prime importance in oil field drilling operations, for failure of supply may result in stuck drill stem, incorrect mud quality and other losses. Various types of electric-powered water systems in producing fields are described.

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PROBLEMS FROM READERS—By L. G. E. Bignell Page 57

Does vegetation indicate presence of oil and gas? Water treatment for Bradford field. Cost of shooting wells. Additional data on St. Peter and Wilcox sands. Power cost for lease operations. Oil production problems on the island of Cuba.

Butane Used to
Oil at Carter's

By D. H. STORMONT

Battery of heat exchangers used for cooling gas in Carter's high-pressure system. Gas in this system is compressed to 335 pounds in two stages

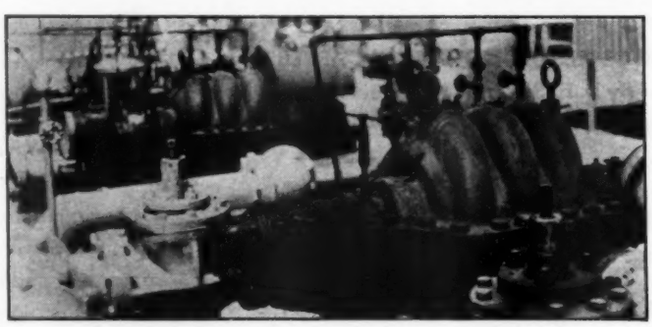
Through utilization of butane extracted during the stabilization of its natural gasoline, Carter Oil Co. is increasing the daily output of its Fittstown, Okla., gasoline plant by some 7,000 to 9,000 gallons. This added recovery is accomplished by using the mixture to lower the temperature of the absorption oil approximately 27° F. lower than temperatures obtained by cooling with water. The volume of oil circulated in the two absorption systems, some 550,000 gallons in each system, is also kept at low figures.

As the plant is now operating, absorption oil is cooled to about 87° F. by cooling with water. The oil is then passed to a six-pass, horizontal cooler in which the oil flows through the coils while the butane is passed through the interior of the shell and around the coils. The oil leaves the cooler at about 60° F. and is moved back into the absorption system. The butane-propane mixture is made up of 85 per cent butanes and 15 per cent propanes, being taken from the bottom of the stabilizer when making butane-free gasolines. A 230-hp. compressor is used to compress the butane vapors to a pressure of 85 pounds, at which pressure the condensate passes to a water cooler.

Operation of Cooler

Upon entering the oil cooler the pressure of the liquid butane is reduced, due to the large volume of the enclosure, to approximately 5 to 7 pounds or to the pressure maintained on the cooler. As the liquid hydrocarbons vaporize a refrigerating action is caused and heat is absorbed from the absorption oil. A pressure regulator is used to control the amount of liquid butane in the cooler. When the pressure in the cooler exceeds the predetermined pressure, flow of butane is cut off until enough butane has evaporated to lower the liquid level. The absorption and distillation system of the plant is divided into two units, another cooler being used to cool the oil of the second unit in a similar manner.

The plant, which was placed in operation in October, 1935, has passed through several expansion programs in gaining its present peak capacity of 84,000,000 cubic feet of gas per day and the recognition of being one of the largest absorption plants in the United States, excluding plants operating at well pressures. When Carter originally placed the plant in operation only eight 230-hp. gas engine-driven compressors were employed, the plant having a daily gas capacity of 30,000,000 cubic feet. Soon afterwards three more units were added and then in the summer of 1936 its capacity was increased 20,000,000 cubic feet by the addition of eight more 230-hp. compressors. When a demand for high-pressure gas was established in the early part of 1937, two units were added, and recently 17 more to bring the total up to its present number of 38.



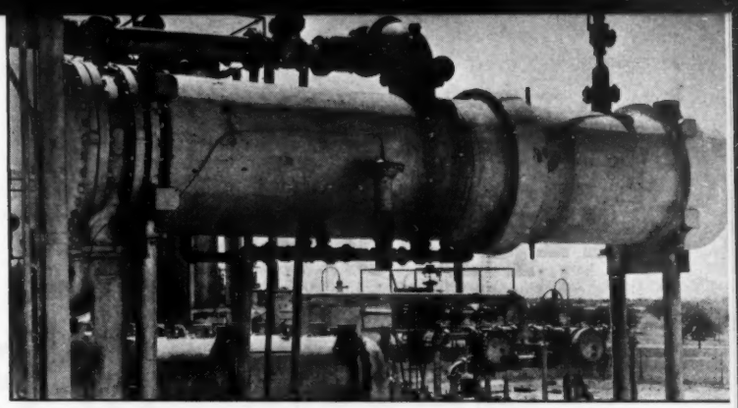
Three-stage centrifugal pumps, operating at 1,800 r.p.m., used in one of the plant's absorption oil systems. All pumping units are driven by explosion-proof motors

Both high- and low-pressure absorption is used in the plant, 21 of the engines being used to boost the pressure of the incoming gas from about 8 pounds to 38 or 40 pounds. The remaining 15 engines take a portion of the low-pressure gas after it has passed through coolers and boost it to approximately 335 pounds. Two-stage compression is employed in raising the low-pressure residue to its discharge pressure. The high-pressure cylinders pick up the gas at 115 pounds, after it has passed through intercoolers and scrubbers, and boost it to 335 pounds at which pressure it is turned into Cities Service Gas Co.'s 12-inch line after its gasoline content has been extracted and the gas scrubbed free of entrained oil.

In general, the operation of the plant is as follows: Incoming gas from the field is taken by three 16-inch lines leading to a 20-inch header so that gas will be distributed more equally to the engines. The gas is passed through six field scrubbers to the intake cylinder of the single-stage compressors where it is boosted to about 40 pounds, then cooled and scrubbed. Approximately two-thirds of the gas is then taken to the low-pressure system. Six absorption towers are used, one of which operates as a high-pressure absorber. Residue leaving the tops of the low-pressure towers is passed through scrubbers to remove any oil that might be entrained in the gas and then is used as fuel for the gas engines, for

Carter Oil Co.'s natural gasoline plant at Fittstow[n] [Okla]. feet, thus making the plant one of the largest in t[he] [Mid]pressures. The plant was recently enlarged b[y]

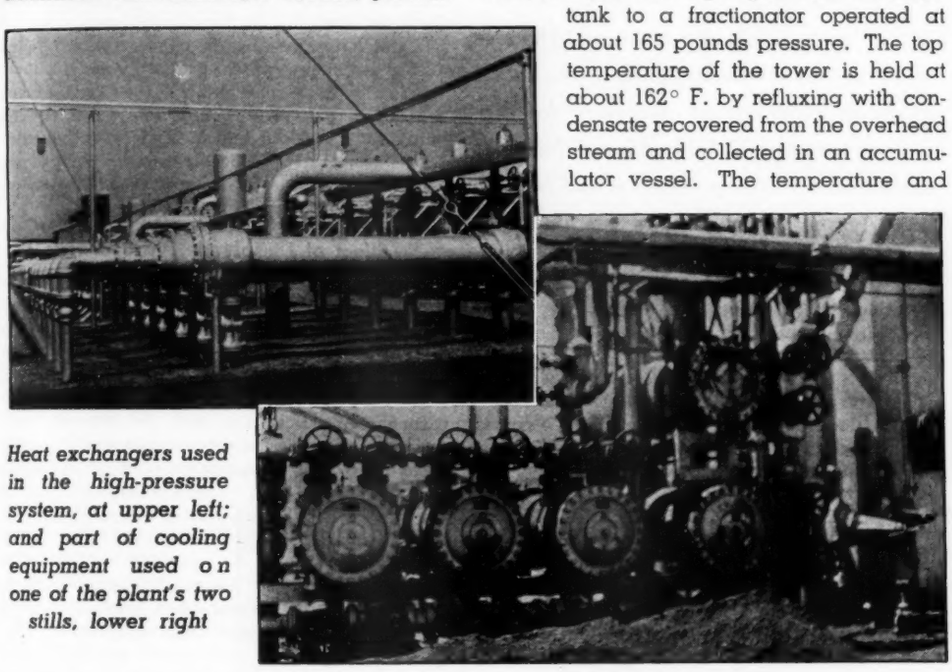
Cool Absorption Fittstown Plant



One of two butane evaporators used in cooling the absorption oil. Each unit cools some 550,000 gallons of oil daily

lease purposes, or is released into the air.

The rich oil leaving the base of the high-pressure absorber is pumped back into the low-pressure system and joins rich oil from the low-pressure towers before entering the distillation heat-exchanger system, preheaters and still. Two stills are employed, the rich oil entering the stills after having been heated to about 330° F. by flowing through exchangers heated by the lean oil and through preheaters. Lean oil is removed from the base of the stills and is cooled first with water and then with the butane mixture. Vapors from the tops of the stills are passed through coolers and condensers into accumulators. The amount of reflux required to hold the top of the still temperature at the desired point, about 200° F., is pumped back over the towers from the accumulators. That not required for reflux is removed from the accumulators through automatic liquid-level controllers and is pumped to a raw gasoline surge tank.



Heat exchangers used in the high-pressure system, at upper left; and part of cooling equipment used on one of the plant's two stills, lower right

In stabilizing the gasoline to a finished natural of desired gravity and vapor pressure, raw gasoline is pumped from the surge tank to a fractionator operated at about 165 pounds pressure. The top temperature of the tower is held at about 162° F. by refluxing with condensate recovered from the overhead stream and collected in an accumulator vessel. The temperature and pressure of the overhead vapors varies as to the vapor pressure of the product desired, as well as the temperature of the reboiler. Bottoms from the rectifying column are removed at approximately 287° F., cooled and stored for use in cooling the absorption oil. Stabilized gasoline is removed from the accumulator and run to storage.

When the company is manufacturing 26-70 natural gasoline, no butane is removed from the base of the fractionator. If a shortage of butane for cooling the absorption oil develops from the continued manufacture of this grade, or for any other reason, butane is shipped in from Carter's Grisso plant in the Seminole field. Since all equipment for handling the butane was designed for use with relatively pure butane, care is exercised at all times to keep the percentage of propanes from becoming too high, as this would require the use of higher compression to liquefy the vapors.

At present Carter is operating only one stabilizer. However, a tower similar to the one now in operation is being erected and will be placed in operation shortly.

Cooling Facilities

Efficient cooling is obtained through the use of six modern cooling towers. In one large tower, second from left in the general view of the plant, residue gas at plant pressure is utilized to lift water over the cooling tower. Water flows by gravity from the cooling tower into a well, and is lifted by a gas jet arrangement into the receiving tank placed a few feet higher than the tower. Here, the water and gas are separated, the water flowing to the water distribution system in the tower. The jetting system has proved most efficient, being operated at about 23 pounds pressure, and also the cost of pumping equipment is saved. The company is planning to install similar gas-lift systems on its other towers since a large volume of low-pressure gas is available for such usage.

Power for the plant is supplied by four 250-hp. Cooper-Bessemer gas engine-driven generators. However these units have proven to be insufficient since the last addition was made so that some purchased power is used. The company is now excavating for foundations for three more units of 300 hp. each. However, most of this added capacity will be used for pumping nearby wells or for use with standby pumping equipment.

kla. Daily gas capacity of the plant is 84,000,000 nited States, exclusive of plants operating at well e addition of seventeen 230-hp. gas engines

Lion Oil Operates Vacuum Filter

Lion Oil Refining Co. is operating a new type lubricating oil filter at its El Dorado, Ark., refinery. The new equipment operates at pressures below atmospheric and this statement is intended to correct the caption under the upper picture on page 73 of the July 15 issue in which the filter is referred to as a pressure filter.

Applying the Basic Mechanism of Solvent Extraction

By JOHN W. POOLE
Petroleum Chemist, New York City

In this fourth article of a series on "Theories and Practices of Solvent Refining" the author discusses requirements necessary for continuous operation. Other articles of the series appeared in the May 6, July 8 and July 15, 1937, issues of The Oil and Gas Journal.

In the previous paper, subject matter was confined solely to the basic mechanism through which solvent extraction becomes an operable procedure; i.e., the two-phase system and the selective distribution of certain substances between these phases. However, progress was made only to the point where separation of a raw stock into two fractions of radically different characteristics had taken place. The recovery of these fractions in commercial form was not shown, nor did the discussion cover certain practical requirements which are necessary for continuous operation. The paper was designed to do little more than provide a clear picture of the mechanics involved.

While it is true that a relatively small quantity of material could be fractionated in the manner described, continued charging of raw stock would lead to such a change in conditions as to cause the mechanism to cease operating as shown and eventually become useless. It is, therefore, necessary to prevent impairment of a properly coordinated mechanism. Proper conditions, once being attained, must be preserved.

Influence of Raw Stock

If a material quantity of raw stock should be added to the system shown in Figure 2, there would be no direct influence on the oil phase other than to increase its volume by a corresponding amount. This is true only because this phase is primarily formed by the so-called "good oil" present in raw stock. Addition of more "good oil" regardless of source has the sole direct effect of increasing the volume of this phase.

On the other hand, a marked change may be effected on the solvent phase with secondary manifestations in the oil phase.

As fresh raw stock is added, the concentration of oil impurities must of course increase in the solvent phase. For a time secondary effects of this increase may not be particularly marked. Although if the distribution ratio is constant, the concentration of these impurities in the *oil phase* must be proportionately increased. This is a tendency obviously leading to degradation of the quality of the oil produced, which, except for dissolved solvent, is identical with the oil phase. Another secondary effect will be a progressive decrease in the quantity of solvent in the solvent phase: When the 90 per cent "good oil" content of the raw oil joins the oil phase it must take with it sufficient solvent to satisfy compositional requirements.

For example, let us consider what happened in Figure 2 when raw stock comprising 90 parts of good oil were charged. From the previous chapter, we know that the composition of the oil phase is 80 per cent good oil and 20 per cent solvent. When the new oil merges with this phase, this fixed composition therefore requires the further addition to this phase of 22½ parts of solvent. Unless more solvent is introduced, these 22½ parts must be secured by depriving the solvent phase. The result is to exaggerate the increase in concentration of undesirables in the solvent phase.

These factors alone tend to decrease the purity of the oil phase. Furthermore, if the concentration of undesirables in the solvent phase becomes excessive—say over 25 per cent—the selectivity of the solvent will become seriously impaired. And if the concentration continues to increase, selectivity may be lost entirely. This matter of reduced selectivity through increased solution of hydrocarbon substance in the solvent is an important one. It has been correctly described by various writers as the power of dissolved hydrocarbons to dissolve other hydrocarbons. Regardless of theoretical reasons, the effect is to increase the amount of good oil in the solvent phase. And in light of the increase of impurities in the oil phase, the final result is to injure both recovery and quality of the final raffinate.

It would appear that the permissible concentration is moderately critical, although any such "critical concentration" is evidently influenced by several factors. As will hereinafter more fully appear—for the usual commercial solvents, which inherently possess "good" selectivity—concentrations of "dissolved" hydrocarbons in the solvent phase up to 20 per cent seem safe. Beyond that point it is best to proceed with care. Below 10 per cent the concentration of hydrocarbons in the solvent phase appears to have very little effect on the power of that phase to dissolve other hydrocarbons.

This matter of "critical concentration," in the author's opinion, would profitably be a subject for further research. In fact, the effect of concentration of hydrocarbons dissolved in the solvent might well be investigated over the entire range, from "zero" concentration up to 40-50 per cent. It is the writer's experience that the following statements approximate fact.

Effect of Dissolved Hydrocarbons

From "zero" concentration to 6-10 cc. of dissolved hydrocarbon material per 100 cc. of solvent, there is little or no increase in the power of the solvent or solvent phase to dissolve other hydrocarbons of viscosity index in excess of 80. From 6-10 cc. per 100 cc. to about 20 cc. dissolved hydrocarbons per 100 cc. of solvent, the increased solution of such high-viscosity-index material in the solvent is roughly proportional to the total amount of dissolved substances. Above 20 cc. per 100 cc. and under 30 cc. per 100 cc. there is a point after which an increase in dissolved hydrocarbons causes disproportionately high increase in the solution of high-viscosity-index oils. This increase after the region of criticality is attained is subject to rapid acceleration. The author's experience has been that the nature of the hydrocarbons dissolved in the solvent has very little bearing on this increased power of the solvent to dissolve high-viscosity-index hydrocarbons. Apparently the reason why this statement is not an absurdity lies in the extreme complexity of commercial charging of stocks, so that as long as the solvent remains moderately selective the bulk of the material dissolved in it continues to differ from the bulk of the material in the raffinate. Consequently, the amount of dissolved "good oil" continues to be some function not of the dissolved "impurities" alone but of the sum total of all dissolved hydrocarbons, including the dissolved "good oil" itself.

The writer's experience on this matter has been mainly with one particular solvent. Data at his disposal relative to other solvents is rather scattering; nevertheless, the typical curve shown as Figure 4 is believed to be characteristic of all solvents; at least qualitatively and providing the

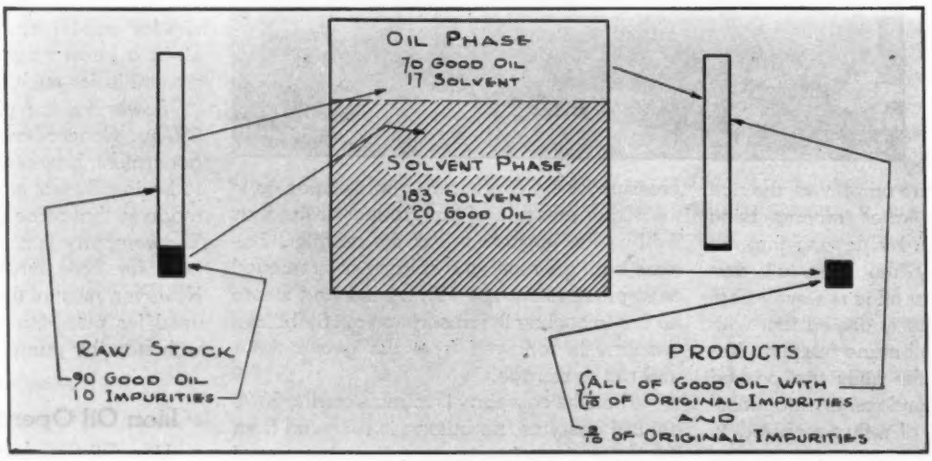


Fig. 2—Diagram illustrating method of analyzing two-component systems

quantity of solvent *dissolved in the oil phase* does not greatly exceed 25 volume per 100 volumes of oil.

It is of course true that the ordinates of Figure 4 could be plotted as a function of total hydrocarbons less the amount of high-viscosity-index oil. However, since the correlation appears to be reasonably independent of type of hydrocarbons dissolved, it is vastly more practical in use to plot the data as shown.

As applied to the stage shown in Figure 2, the quantity plotted horizontally in Figure 4 means, in effect, an infinite ratio of solvent to oil at "zero" concentration. For while other means may be used to alter the concentration of dissolved material the method most often employed in practice is alteration of oil-solvent ratio. Therefore, it is largely to be presumed that progression toward the right means decreased volumes of solvent. At the same time, these diagrams appear to be substantially correct regardless of the means employed to attain the various points on the horizontal scale. Means less frequently employed than control of solvent volumes, yet by no means infrequent, are change of operating temperature and the use of modifying agents which increase or decrease the solvent power of the solvent. The diagram will fail to be representative if conditions become such that the solvent is over miscible with the oil phase.

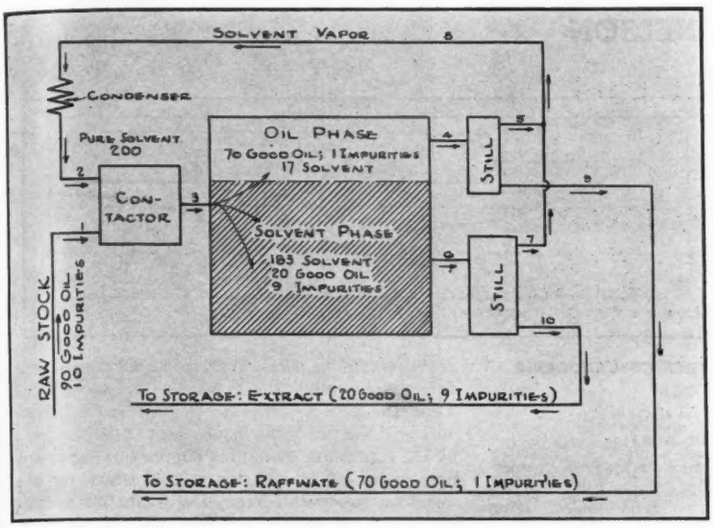


Fig. 3—Flow diagram of simplest possible continuous solvent extraction plant using single-stage extraction

Miscibility Data

While data on what constitutes undue miscibility is deplorably meager, an oil phase containing 30 per cent or more of solvent is definitely incompatible with proper selectivity. Even points as low as 20 per cent are normally too high, although concentrations within this range may be tolerable. Concentrations below 20 per cent are greatly to be desired. Selectivity appears to a consistent inverse function of solvent concentration in the oil phase.

With these facts in mind let us again consider Figure 2 and investigate those means which are utilized in preserving conditions necessary to maintain the fundamental mechanism in satisfactory form. Once these conditions have been predetermined, possibly tentatively by use of some such curve as Figure 4, it is obvious that the problem is resolved into one of the maintaining temperature and the relative amounts of solvent and oil. The only requirement is that as new oil is added, solvent also be added in the existing ratio. By our original assumptions this ratio was fixed at 200 parts of solvent for each 90 parts of good oil. Since 10 parts of oil impurities enter with the good oil, the overall ratio is two parts of oil for each part of charging stock.

Figure 3 is a flow diagram of the simplest possible continuous extraction plant—that possessing a single stage. Analysis of it will obviate certain inaccuracies of Figure 2, although the latter figure provides a far better visualization of why solvent extraction works.

In Figure 3, raw stock similar to that previously described enters a contactor through line 1, where it is thoroughly contacted with twice as much solvent entering through line 2. Equilibrium is established under conditions identical with those discussed in the preceding article, and if the mixture is steadily and uniformly passed through line 3 into a settling chamber two phases will exist, the composition of which will be respectively 70:1:17 and 20:9:183; good oil, impurities and solvent in the stated order. In exactly the same quantity as they enter from the contactor, both phases should be withdrawn (4 and 6) from the settling chamber to enter individual stills in which the solvent is removed from the respective phases by vaporization. The resulting vapors pass (5, 7 and 8) to a condenser from which the reliquified solvent passes again to the contactor, completing the solvent cycle. A small loss takes place in this cycle so that "make-up," not shown, must be added. However, with a stable, reasonably volatile solvent this loss is so minute as to be scarcely detectable over a single cycle. In plant operation solvent may need to be in use for weeks before the magnitude of loss can be accurately calculated.

The removal of solvent results in two fractions comprising all, and only, the constituents of the original raw stock. The composition of these two fractions, raffinate and extract, is evident from Figure 3, being identical with the composition of the oil and solvent phases respectively, except for the elimination of the solvent therein. These fractions leaving the stills through lines 9 and 10 will be composed of good oil and impurities in the ratios of 70:1 and 20:9.

The discussion of Figure 3 covers all the basic principles of solvent refining. While not representative of the excellent results which can be secured in practice, further improvement is attained merely by further subjecting the two fractions separately to the same basic mechanism. Results obtainable by this repeated extraction and the interrelation of the several extractive stages will be discussed in a subsequent article.

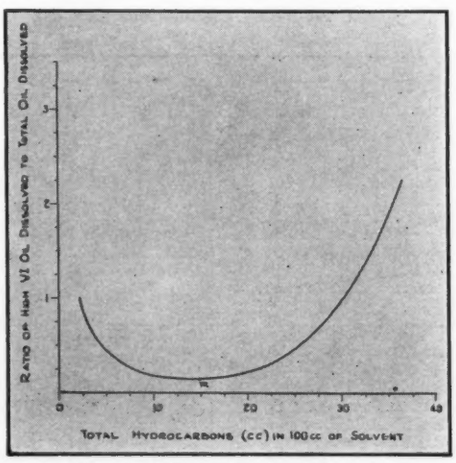
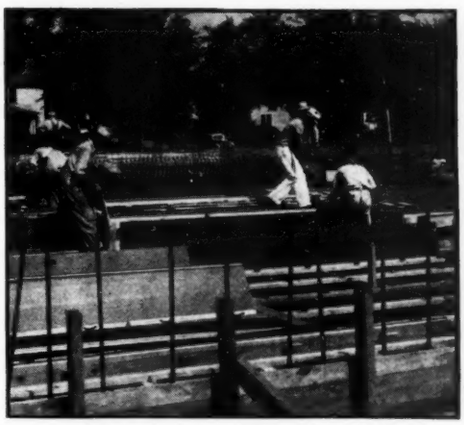


Fig. 4—Typical solvent curve

Unusual Construction Methods Used in Erecting Laboratory

Unusual construction methods are being used in fabricating the Phillips Petroleum Co.'s research laboratories being built in Bartlesville, Okla. When completed the building will be completely air-conditioned and there will be no windows in the entire structure. The building will include two floors of rooms. From the base of each floor and completely encircling the building the outside walls will be built up with approximately 4 feet of brick, on top of which will be 5 feet of glass blocks. The glass will act as insulation and will provide maximum natural light. The picture shows the method of constructing the forms preparatory for pouring the lower floor, which will be made of cement.



BRADFORD THIRD SAND

(Continued from Page 25)

The anomalous occurrence with respect to the present elevation of the sand of the connate water around the margins of the pool and in the nonproductive area between the two lobes, which will be described in a later article, is probably due in part at least to the fact that between the time when the oil accumulated and the present structure developed, the permeability of the sand around the margins of the pool was so reduced by cementation and metamorphism that a new adjustment of the oil-salt water contact was impossible. An alternate explanation is that the numerous sand lenses of the Bradford Third sand are not continuous, hence no perfect alignment of the edge water at a definite level around the margins of the pool was possible. If this is the case, lateral migration in the Bradford Third sand could not have been an important factor in the accumulation of the vast volume of oil in the Bradford pool.

The gas caps occupying the Knapp Creek dome in the northeastern portion of the field and the Rixford dome in the eastern part are in good adjustment with the present structure.

Production of Naphthenic Base Oil Declining in California

By W. L. NELSON

Twenty California oil fields have produced enough oil to be classed among the 99 largest fields of the past 10 years. Table 1 shows the general properties of these crude oils and the properties of the average oils produced each year are shown in the accompanying charts.

In general, California has been the largest producer of naphthene or asphalt base crude oils. However, since 1927, the production of this base of oil has dropped from 40 per cent to 26.6 per cent. Naphthene or asphalt base oils produce the best gasoline from an antiknock standpoint. Little or no paraffin base oil is produced in California.

The changes in the properties of the average crude oil year by year was due mainly to activity in the following fields:

1927—Midway-Sunset, Huntington Beach, and Long Beach were dominant, although several other fields were also important.

1928—Long Beach at peak production of 62,000,000 bbls.

1929—Santa Fe Springs at 76,000,000 bbls. and Long Beach still big.

1932—Santa Fe Springs, Midway-Sunset, Long Beach and Kettleman Hills dominant.

1936—Same fields still dominant in 1936.

In 1927 the percentage of naphthene base crude oil amounted to 40.3 per cent. This was largely due to the older naphthenic fields such as Kern River, Midway-Sunset, Elk Hills, Coalinga, Fullerton, Montebello, Richfield and Inglewood. Since 1927 the production from these fields has steadily decreased and not a single major naphthene base field has been discovered since that time. Meanwhile many large intermediate base fields have been discovered so that the proportion of naphthene base oil has steadily decreased until in 1936 only 26.6 per cent of the crude oil was naphthene base. The largest of the naphthene fields is Midway-Sunset and this field is still the third largest field in the state being surpassed only by Kettleman Hills and Long Beach. The fact that the naphthene fields have been long lived fields has served to sustain the percentage of naphthene production.

In general the naphthene base oils have a low gravity, contain a relatively large amount of sulfur, and contain little or no gasoline or naphtha. Thus, the general properties of the oils produced during these years was governed to a large extent by the constantly dwindling supplies of naphthene base crude oil. In addition to this effect, the tremendous production from the Santa Fe Springs field of 76,000,000 bbls. in 1929, was influential in governing the properties of California oils. Between 1927 and 1929, the gasoline content jumped from 17.5 per cent to 24.6 per cent, the sulfur content from 1.14 per cent to 0.89 per cent and the A.P.I. gravity from 24.6 to 28, largely by the effect of the Santa Fe Springs field and the decreasing production from the naphthene fields. After 1929 the properties of the crude oils did not change markedly because of a continual development of new intermediate base fields.

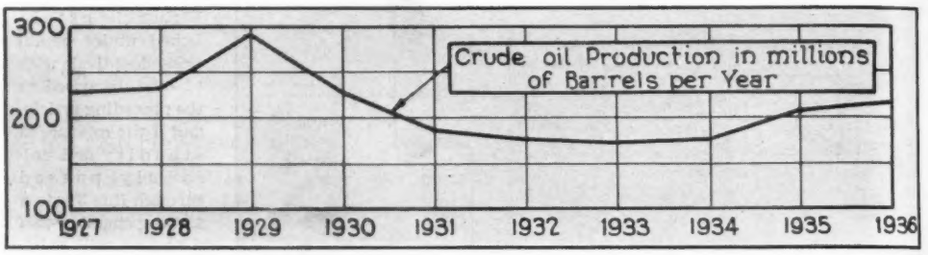


TABLE 1—CHARACTERISTICS OF CALIFORNIA CRUDE OILS

Field—	Gravity A.P.I.	Per cent sulfur	Per cent gasoline and naphtha	Base	Reference
Santa Fe Springs	34.8	0.45	36.7	Inter.	(2)
Elwood-Goleta	38.0	0.18	40.1	Inter.	(4)
Ventura Avenue	30.2	1.16	27.6	Inter.	(2)(6)
Seal Beach	24.2	1.23	16.0	Inter.	(7)
Kern River	14.1	1.07	0.0	Naph.	(2)
Mountain View	30.0	0.44	22.9	Inter.	(8)
Midway-Sunset	19.0	1.00	0.0	Naph.	(2)
Elk Hills	23.1	0.68	12.3	Naph.	(2)
Coalinga	25.0	0.53	17.6	Naph.	(2)
Fullerton	22.1	1.43	18.1	Naph.	(*)
Coyote	25.9	1.46	20.5	Inter.	(2)
Montebello	20.2	0.85	5.3	Naph.	(2)(6)
Richfield	22.3	1.09	14.7	Naph.	(2)
Huntington Beach	24.9	1.42	18.4	Inter.	(2)
Long Beach	28.2	0.80	29.3	Inter	(2)
Torrance	21.7	1.62	14.6	Inter.	(2)
Inglewood	18.2	2.59	6.2	Naph.	(7)
Dominguez	32.0	1.76	22.2	Inter.	(2)(6)
Playa Del Rey	24.7	2.60	23.0	Inter.	(4)
Kettleman Hills	44.9	0.10	59.0	Inter.	(4)(9)

*I. Crit. Table.

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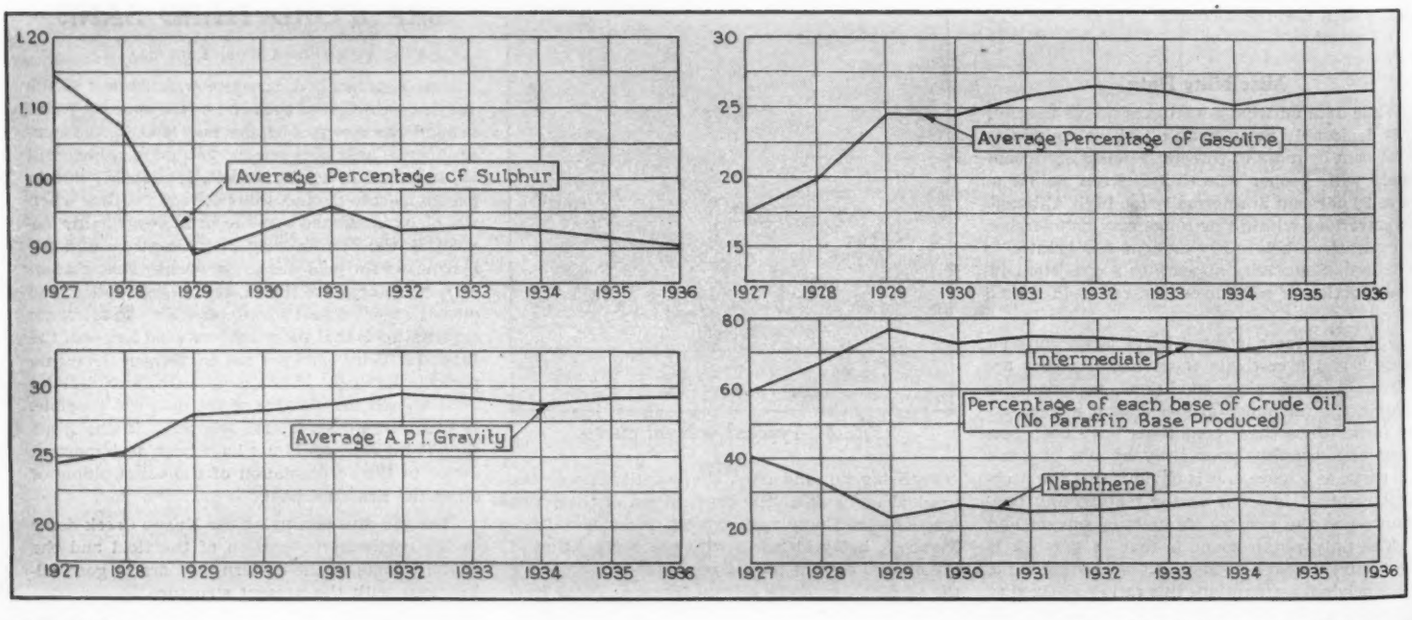
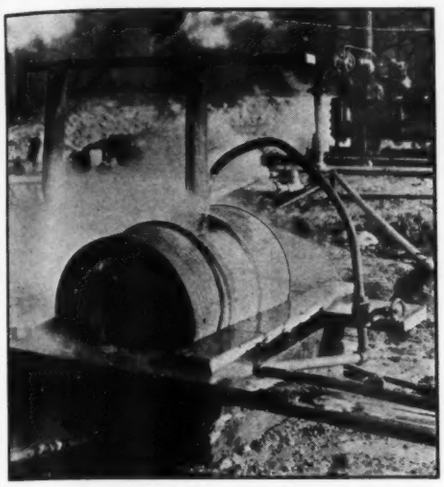
8. Unpublished Bur. of Mines Analyses.
9. By Univ. of Tulsa or by private communication.



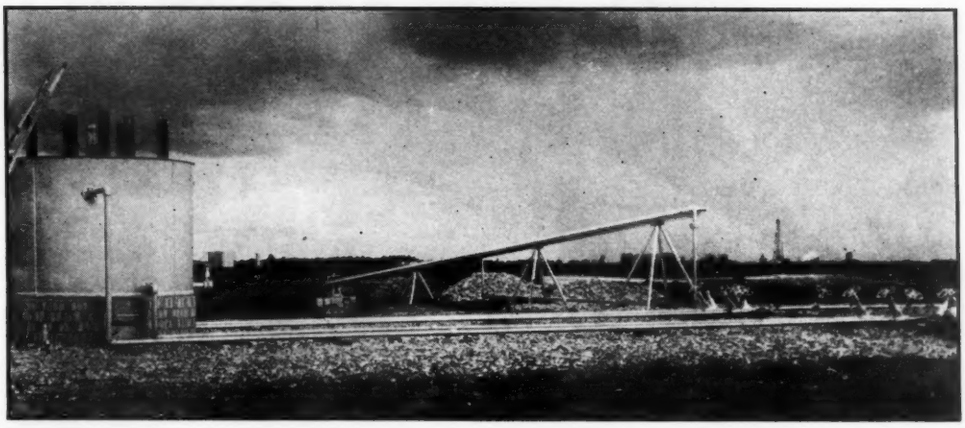
OPERATING IDEAS

Wash Day on Rotary Rig



Every day is wash day to the crews working on rotary drilling tools. Each shift washes its clothes in this oil barrel. This is accomplished by turning steam into the barrel. This procedure takes about one hour to extract all of the grease and dirt from the work clothes. It is not equipped to conserve steam.

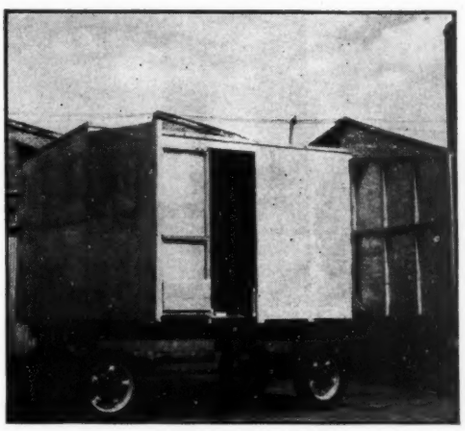
Reducing Manifold on High-Pressure Well

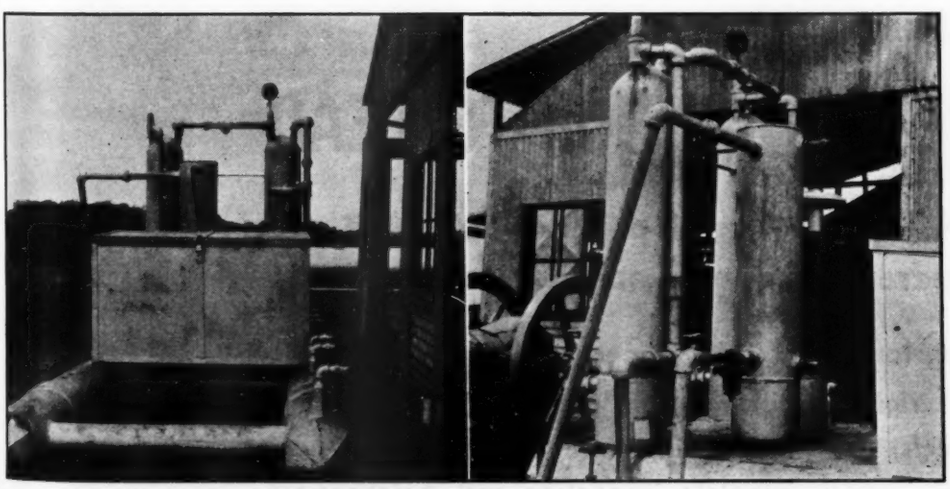


In the Hastings pool on the Gulf Coast of Texas one well has a 2,200-pound tubing pressure, thus requiring a reducing manifold on the flow line before the oil is treated. By using this equipment the pressure is reduced to about 150 pounds before it enters the separator and treater. After being treated the oil flows to the inclined water-knockout, shown between the treater and manifold in the accompanying photograph, and the water removed from the fluid.

Collapsible House

Providing ease of mobility without sacrificing room for comfort, a major producing company in the Mid-Continent has developed the design and construction of collapsible, two-room houses to be used at the drilling well. The frame is essentially wood covered with galvanized sheet-iron. The roof divides lengthwise through the center and along the ridge so that one-half of the roof can be folded back on the other. The lower half is stationary and the ends and side walls of that half are also stationary. The ends of the other half of the house are swung on hinges and when the house is being pulled from one location to another, these ends are folded back against one side of the stationary room. When at the well and the house is in use, the derrick floor serves as the floor for the collapsible section.



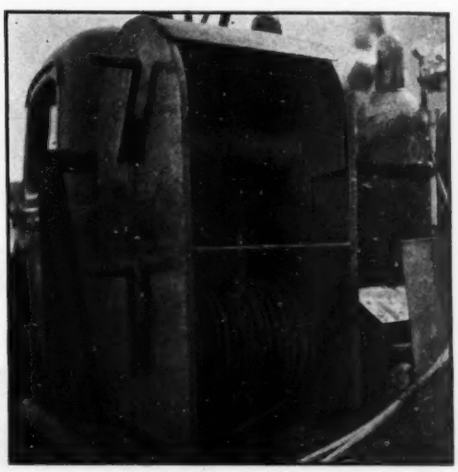


Vaporizing Butane for Drilling-Engine Fuel

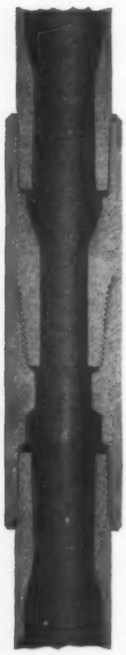
One contractor drilling near Prague, Okla., with a gas-electric drilling rig, finds it necessary to use part butane as fuel for the drilling engines since there is not sufficient natural gas to keep the engines running. This is accomplished by circulating the butane through a hot-water coil supplied with water from the radiator. The butane is vaporized and blends with the natural gas to give a steady flow of fuel to the engines without changing the adjustment of the jets on the engines. Equipment used in heating and blending the butane is shown in the picture.

Hose and Cable Rack

Most oil field welding contractors equip their trucks with both electric and gas welding equipment. Consequently they have several hundred feet of hose and cable to contend with. The neat reel shown in the photograph takes care of both the hose and cable and eliminates their becoming tangled.

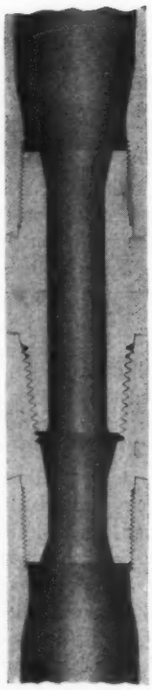


REED LEADS the

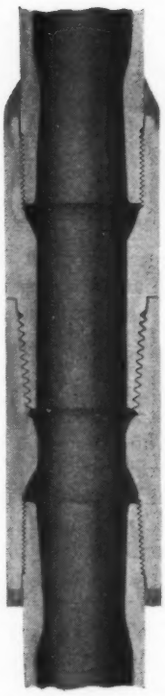


REED A.P.I. REGULAR Tool Joint on A.P.I. Internal Upset Drill Pipe.

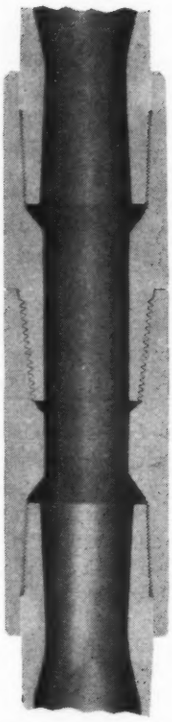
REED A.P.I. FULL HOLE Tool Joint on Regular A.P.I. Internal Upset Drill Pipe.



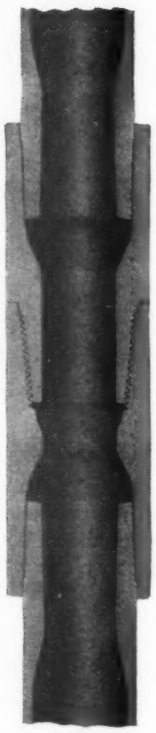
REED EXTERNAL FLUSH (Sheldon-Burden type) Tool Joint on External Flush Drill Pipe for pressure drilling.



REED A.P.I. FULL HOLE WELDED-ON Tool Joint on Regular A.P.I. Internal Upset Drill Pipe.



REED SHRINK GRIP Tool Joint on Special A.P.I. Internal Upset Drill Pipe.



REED DOUBLE GRIP Tool Joint on Pittsburgh special Double Grip Internal Upset Drill Pipe.

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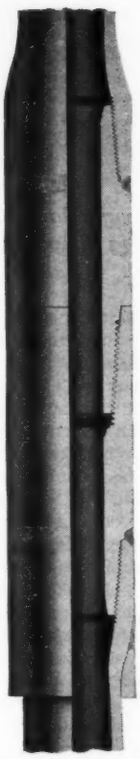
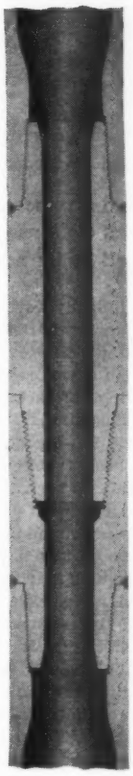
Their reputation for longer life and more wells per string is the direct result of rigid specifications in the selection of highest grade alloy steels; precision manufacturing; and scientific heat treating . . . . . under complete inspection and metallurgical control at all times.

"IT'S REED TOOL JOINTS ALL THE WAY"

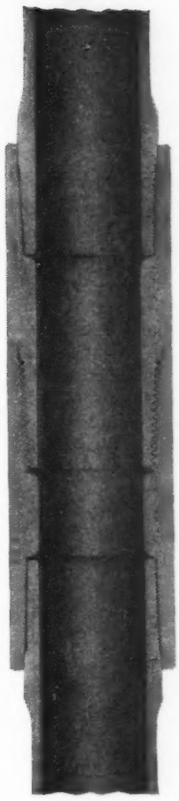
TOOL JOINT Parade



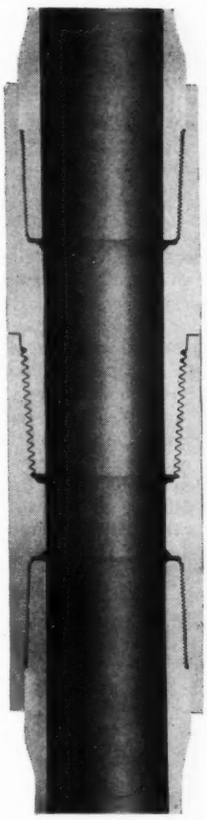
REED SHRINK WELD Tool Joint on special National Tube Drill Pipe.



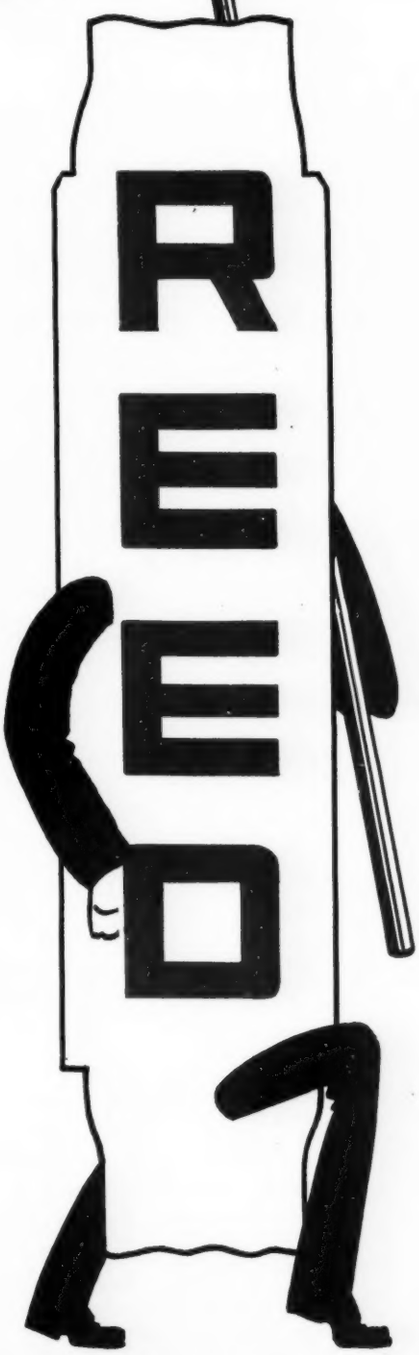
REED EXTERNAL FLUSH SHRINK WELD Tool Joint on special National Tube Drill Pipe for pressure drilling.



REED DOUBLE GRIP INTERNAL FLUSH Tool Joint on Pittsburgh special Double Grip Drill Pipe.



REED SHRINK GRIP INTERNAL FLUSH Tool Joint on Internal Flush External Upset Drill Pipe.



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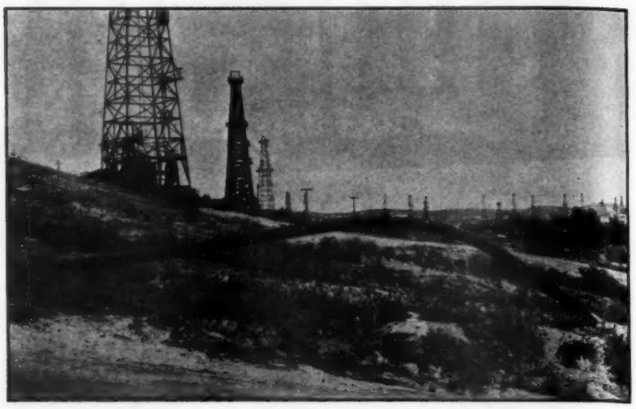
"IT'S REED TOOL JOINTS ALL THE WAY"

Active Fault in California Field Causes Unusual Problems

By T. P. SANDERS

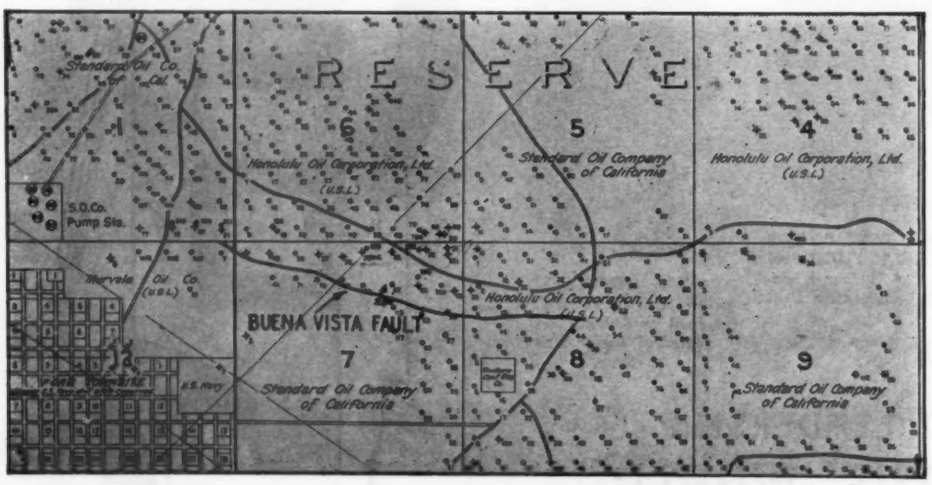


Pipe line buckled up due to displacement along a thrust fault in the Buena Vista Hills field. Collapse of casing in nearby wells is caused by the same fault

While every oil field has its individual producing problems, few if any areas have been affected by a single condition comparable to that which exists in a portion of the Buena Vista Hills field of California. Here it has been found that the wells pass through the shear plane of an active thrust fault. Steady, irresistible movement along this plane distorts casing and leads to expensive repair work or early abandonment of profitable producers. This natural phenomenon has cost operators well over a million dollars in repair work and lost production, but it has also afforded an opportunity for study of movement along a fault. The movement is especially interesting in this case because it appears that the same earth forces which arched up the anticlinal structure of the Buena Vista Hills field may be causing this current fault displacement. This may indicate that arching of the structure is still in progress.

Wells in a strip covering an area of nearly a square mile are affected by the fault. Successful repair jobs have been accomplished on five wells, 22 have been abandoned because casing collapse occurred at a depth too great for profitable reconditioning, and many more are producing under difficult conditions with a very limited future outlook. A dozen new holes have been drilled to replace abandoned wells, but this practice is no longer profitable, since the average production of the affected area is about 30 bbls. per well per day. The average life of wells on which no reconditioning work has been undertaken has been about nine years before distortion of casing has forced abandonment. Careful determination by three different methods has shown the average yearly fault displacement to be 1½ inches.

The Buena Vista Hills field lies on the west side of the San Joaquin Valley about 2 miles northeast of Taft. The anticlinal structure of the field has a northwesterly trend. On the southwest flank the troublesome fault, known as the Buena Vista fault, appears at the surface and can be traced for a distance of 1½ miles where it passes through the northern portions of sections 7 and 8 of Township 32s, Range 24e. Its strike is north 80 deg. west, and its dip 25 deg. northward. Being a thrust fault the movement is that of the upper, or more northerly segment, sliding southward over the lower earth segment. Pipe lines laid across the fault normal to the surface trace have experienced severe buckling, not due to expansion of the pipe but to shortening of the ditches in which the lines were laid. It was this feature which first called attention to the fault at the surface and led to an understanding of the cause of subsurface troubles in the wells. Most pipe lines have been relaid across the fault in a direction nearly parallel to the trace in order to avoid buckling.



Map of portion of the field showing trace of the Buena Vista fault where it is visible at the surface and the large number of abandoned wells north of the fault

Wells drilled through the Buena Vista fault plane are all owned by two operators: Standard Oil Co. of California and Honolulu Oil Corp., Ltd. The average well depth is 2,800 feet. Most of the drilling took place in 1921 after which several years elapsed before trouble due to distortion of casing developed. Movement was in progress during this period, but space around and between the uncemented casing strings prevented immediate damage. Gradually cases began to appear where cleanout strings could not be lowered to bottom. These casing failures were at first attributed to caving formations, and attempts were made to swedge out the pipe, which proved unsuccessful.

In one case a repair job was made by running two strings of casing through the fault zone and filling the annular space with cement. Since no space was left for movement to be taken up, casing failure soon resulted. As time went on cases of stuck tubing became frequent. Most wells were pumped as long as possible before the kinks in the casing made abandonment or repair necessary. One well is now producing through a string of 1¼-inch tubing. which is used in place of sucker rods with a special pump. No tubing catchers are used on the wells of this area, as these would hinder the removal of tubing from damaged casing.

The only repair work of lasting value on wells damaged by the fault is the laborious operation of digging a shaft around the casing down to the shear plane. Because of the expense of digging and supporting the ground, this work is limited to the first row of wells north of the fault trace where the fault is near the surface. Five wells have been reconditioned in this manner, one shaft being dug to a depth of 171 feet.

Repairing Damaged Wells

The material excavated was loose sands and gravels with thin streaks of clay, so that it was necessary to support the walls as fast as material was removed at the bottom. This was accomplished on four wells with creosoted redwood cribbing, the sections being added at the bottom. Shaft sizes were usually 4 feet by 5 feet. Picks, shovels and a powered hoist were used for removal of material. Each shaft was dug through the earth segment above the fault in such a position that as this segment moved southward, the relative movement of the casing would be diagonally across the shaft. This orientation allowed for maximum movement before the well's casing would again be acted on by shearing stresses, and this would probably not occur until sometime after the profitable life of the well had ended.

On the fifth well on which repair work was resorted to, double-shell steel pipe 6 feet in diameter was used to support the walls of the shaft. This was carried to a depth of 100 feet, the pipe being added at the surface in 6-foot sections and forced down by means of hydraulic jacks. At 74 feet, where the fault had been found, the pipe was cut around its circumference with a torch so that the two sections were free to move independently of

(Continued on Page 46)

Cement Off Water in Rainbow Field to Increase Production

By MITCHELL TUCKER

The economic limit is rapidly being reached in heavy water wells in many of the country's old producing fields. It is not uncommon for wells of this type to be producing several hundred times more water than oil, and as the encroaching water increases, the point of unprofitable operation is approached closer and closer. The possibility of increasing crude oil price is the only thing that keeps a large number of such wells from being plugged.

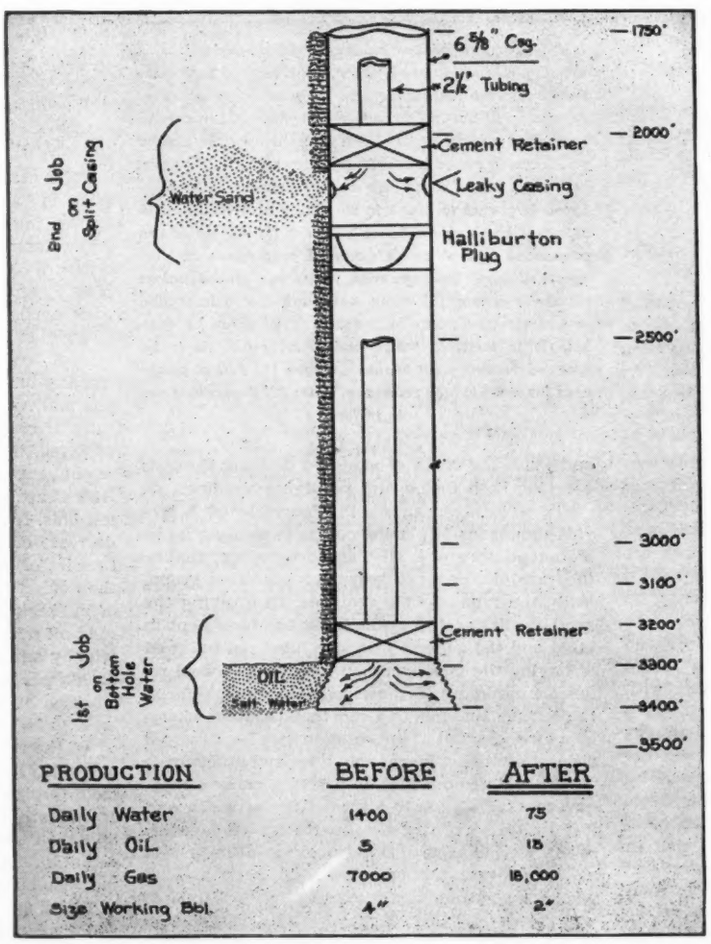
Operators in the old fields of 10 to 20 years of age have two alternatives to meet this condition, (1) to employ mechanical devices and other efficiencies so that lifting costs can be reduced to keep pace with the decreasing oil revenue and increasing operating costs, or (2) recondition these old wells so that the total volume of fluid to be lifted is brought back within the economic limit, and in some cases materially increase the oil production.

In the Rainbow field of Union County, South Arkansas, some highly successful cement squeeze jobs have been placed upon the prolific water sands. After from 30 to 90 days' observations, production from the sealed water sands has not returned. Recent cases are on record where wells having a water to oil ratio of as high as 300 to 1 have been reduced to as low as 5 to 1, with accompanying increases in oil and gas production, and reductions in lifting cost. Clearly, the economic life of such former heavy water wells has been extended several years into the future. Plug back or squeeze work on heavy water wells of the marginal type in this and other fields is steadily increasing, largely due to the fact that more successful results are being obtained all the time. The increasingly successful results from this type of work-over is no doubt due to improved oil well cements, cementing tools, cementing technique, and enlarging experience of the field personnel.

The Placid Oil Co. (H. L. Hunt, Inc.) has been a pioneer in this type of work in the Rainbow field, and a few examples of the successful water shut-off jobs will serve to point out the many economies to be expected from such reconditioning work.

The lower producing sand of that field, locally known as the Gregory, occurs at about 3,350 feet, and constitutes the main source of production from that field. The Gregory occurs throughout a thickness of about 35 feet in the red beds at the base of the Gulf series (Upper Cretaceous). In general, it consists of fine to coarse-grained quartz sand streaked with frequent lime breaks 2 to 3 feet in thickness. Water encroachment is of a bottom-hole or rising flank type.

Originally well No. 16 J. D. Gregory was completed as a large oil producer in 1925, with mechanically perforated casing set near bottom of hole at about 3,350 feet. Water encroachment increased until daily oil production was down to 5 bbls. of oil, and water production up to 1,400 bbls., with about 7,000 feet of gas daily. In order to handle this large fluid volume, 4½-inch tubing was used, and 24-hour pumping was done with a 4-inch working barrel.



PRODUCTION	BEFORE	AFTER
Daily Water	1400	75
Daily Oil	5	15
Daily Gas	7000	18,000
Size Working Bbl.	4"	2"

In preparation for this bottom-hole water shut-off, cement retainer was run on 2½-inch tubing to approximately 3,300 feet, just above the top perforated slots in 6⅝-inch casing. The retainer is considered highly desirable in this sort of work because it relieves the high pressure from the old and rotten casing, placing it only upon the tubing and the one joint of casing in which retainer is set.

After breaking down the formation with water at about 700 pounds pressure, the introduction of cement was begun, and a total of 125 sacks was pumped down tubing, building up a final peak pressure of 2,300 pounds. The tubing was then backed off the retainer body, washed out, and very little cement returns were noted, indicating that the great portion of the 125 sacks went back into the porous oil- and water-bearing formation. Of course, the cement did not set in the oil-saturated portion of the sand, and was later bailed out at completion of the job. Total cementing time was 1 hour and 45 minutes.

Experience has shown that a successful job in this type of heavy producing water sand depends largely upon the application of high pressures, rather than just the introduction of a large cement charge. The placing of cement under high pressure gives greater assurance that the porous streaks or fingers in the water-bearing sand will be more deeply penetrated, filled and sealed. The ability to maintain heavier slurries by the use of new type oil well cements especially adapted to this type work has contributed greatly to the success obtained. Their high pumpability permits the placing of cement into critical points, and the heavier mixture insures minimum contamination from outside waters, with maximum ultimate strength to insure permanent shut-off.

After standing for cement to set, an attempt was made to bail the hole down, but the water could not be exhausted. Halliburton plug was pumped down to determine the point of water intrusion, and a leaky section of casing was found at about 2,100 feet. Plug was left just below this point, another cement retainer run on 2½-inch tubing to a point just above the split casing, and another squeeze placed out throughout the opening into the upper water sand. This sand, which was indicated to be more porous by lower required pressures, began taking breakdown water at about 600 pounds, and after about 100 sacks of cement were placed out through the split casing, pressure began to build up, and when a total of 185 sacks had been pumped down, the pressure had built up to a peak of 1,600 pounds. The tubing was backed off retainer body, flow reversed and casing cleaned, during which time only about 1 bbl. of cement returns were noted.

A setting time of six days was allowed, after which both retainers were drilled out with cable tools, the oil-producing section was gun perforated, the well bailed down and placed on production test. On best 24-hour gauge after completion of this rework, the well produced 15 bbls. of oil, 75 bbls.

water, 18,000 feet of gas, by the use of a 2½-inch tubing and 2-inch grooved seal pump. This represented a 200 per cent increase in oil production, over a 1,000 per cent reduction in water production, more than doubled gas production, and a substantial reduction in lifting equipment and producing cost. After 90 days' continued operation, water production has not shown any increase. The accompanying drawing illustrates this combination squeeze job.

Well No. 3 J. D. Gregory was producing about 600 bbls. of water, 18 bbls. of oil, with about 12,000 feet of casinghead gas, prior to reconditioning. A bottom-hole squeeze job was applied to this well by setting cement retainer in the 4½-inch casing at 3,200 feet near top of producing sand, which was exposed to open hole. The formation broke down at 500 pounds pressure and 200 sacks of retarded action cement placed back into the oil and water-bearing sand at a peak pressure of 1,300 pounds. After standing for five-day set period, retainer was drilled out, hole bailed down, and production test made. The water production had been cut from 600 to 40 bbls. per day, oil increased from 18 to 45 bbls. per day, and casinghead gas production increased from 12,000 to 25,000 feet. It was also possible to effect a substantial reduction in lifting cost following completion of this job. Due to the fact that this well was cased with 4½-inch pipe large pumps could not be used, and a cycle of 72-inch strokes, 30 per minute, was used for the operation of 2-inch pump inside 2½-inch tubing. Following the great reduction in daily fluid volumes to be lifted, the pumping cycle for same size working barrel was reduced to 32-inch, 18 strokes per minute.

ACTIVE FAULT

(Continued from Page 42)

one another. After uncovering the bent portion of the casing it was sometimes found possible to straighten it, but usually all of the pipe has been removed above the fault and the smallest size replaced with straight pipe. The maximum bending of casing so far uncovered was a displacement of 22 inches.

In order to make it possible to record the movements along the fault engineers have driven nails in the cribbing timbers just above the fault plane. Periodically the distances between these nails and the casing is measured, and measurements are checked with former figures.

Gas seeps into the shafts, probably coming up the fault plane, so it is necessary to inject fresh air into the shafts for several hours before the men go down to make measurements. Air is forced down to the shafts' bottoms through tubing with an electric blower.

Measurements obtained in this way support those obtained at the surface by measuring the amount of bending in buckled-up line, and by periodically checking the distances between stakes on opposite sides of the fault trace. Surface measurements, however, brought out the fact that in this area the movement increases to the west and diminishes to zero a short distance to the east. From 1933 to 1936 the average yearly movement at three points 300 feet apart were recorded as follows, the most westerly point being given first:

Set-up	Average yearly movement
1	1.25 inches
2	1.08 inches
3	.84 inch

At its present rate of movement, the Buena Vista fault would have had to be active for about 1,600 years to account for the total displacement, but movement may not always have been of this type. The suggestion has been advanced that vibration of gasoline-plant compressors near the fault may have brought about steady movement rather than the sharp jerky movement felt in earth tremors, but this possibility must be looked on as remote.

Welding Society Evolves New Set of Symbols

Realizing that welding cannot take its place as an engineering tool unless means are provided for conveying full information from designer to workmen, the American Welding Society has evolved and published a set of standard welding symbols covering both fusion and resistance welding.

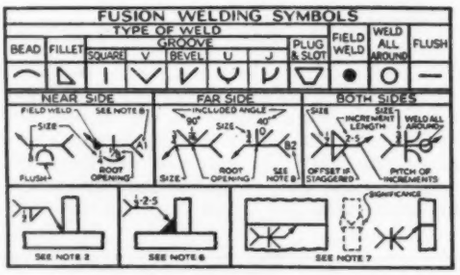


Fig. 1—Legend for use on drawings specifying fusion welding. (1) In plan or elevation, near, far and both sides locations refer to nearest member parallel to plane of drawing and not to others farther behind. (2) In section or end views only, when weld is not drawn the side to which arrow points is considered near side. (3) Welds on both sides are of same size unless otherwise shown. (4) Symbols govern to break in continuity of structure or to extent of hatching or dimension lines. (5) All welds are continuous and of user's standard proportions and all except V- and bevel-grooved welds are closed unless otherwise shown. (6) When welds are drawn in section or end views, obvious information is not given by symbol. (7) In joints in which one member only is to be grooved arrows point to that member. (8) Tail of arrow used for specification reference. Note: All dimensions are in inches

These symbols, shown in Figures 1 and 2, provide the means of placing complete welding information on drawings. They are ideographic; that is, they are picture-writing symbols, showing graphically the type of weld required. In evolving the symbols, the need for simplicity has been kept in mind and the general principle has been followed of having the most common form of any weld require a minimum of numerical data. In final form, the scheme amounts to a shorthand system whereby a large amount of information may be conveyed accurately with a few simple lines and numbers.

It is pointed out that, in practice, many companies may require only a few of the symbols, and if they desire, can make up their own legends, selecting such parts of the system as fit their needs and discarding the remainder. In such a case, where a weld departs from the user's standard, supplementary data will become necessary. But, this simply makes the user's standard a part of the symbol system and means only that exact interpretation will vary slightly among different users. On the whole the symbols lay the foundation for a much needed universal welding language.

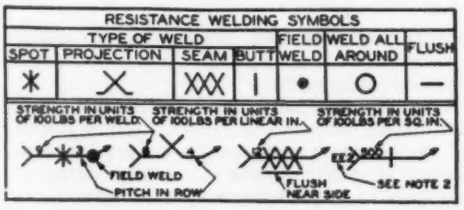


Fig. 2—Legend for use on drawings specifying resistance welding. (1) Symbols govern to break in continuity of structure or to extent of dimension lines. (2) Tail of arrow used for specification reference. Note: All dimensions are in inches

Road Oil Sales Increase

Increased construction of the lighter types of highway resulted in an increase of 21 per cent in the sales of road oil by petroleum refineries in the United States—from 6,798,932 bbls. in 1935 to 8,256,694 bbls. in 1936—according to statistics compiled by the Bureau of Mines. However, if the sales of road oil are taken in connection with sales of cut-back asphalts, paving flux, and emulsified asphalts, a larger proportionate increase (30 per cent) was registered in the total sales of liquid and semiliquid asphalts for highway construction—from 12,316,545 bbls. in 1935 to 16,052,833 bbls. in 1936.

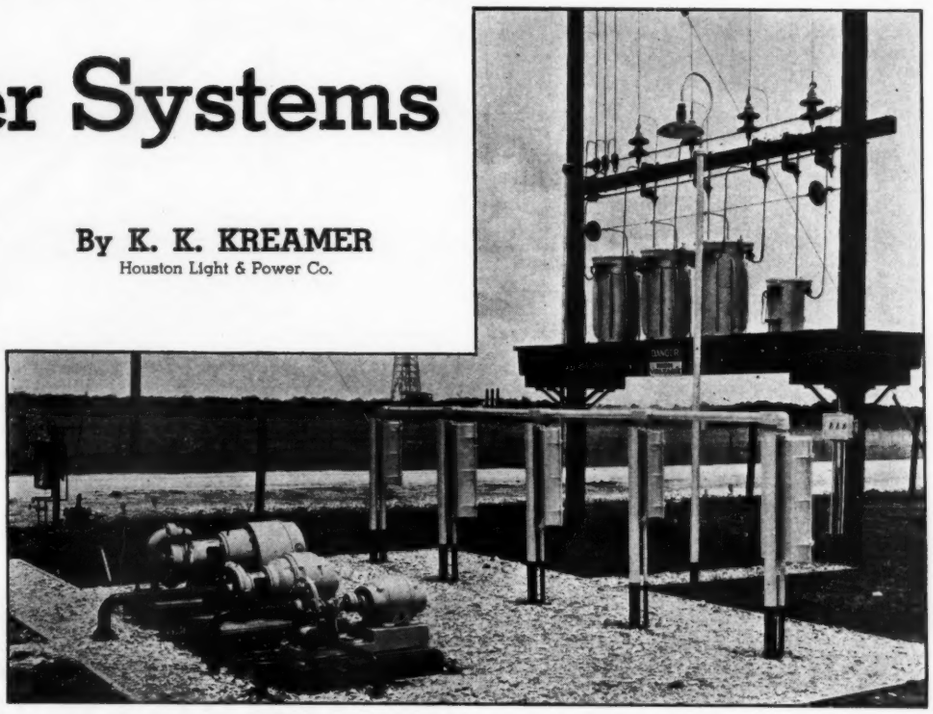
The principal increases in road oil sales took place in California, in northern Louisiana and Arkansas, in the Gulf Coast of Texas, and in the Oklahoma-Kansas-Missouri district. In California, an increase of 831,308 bbls. in sales of road oil was paralleled by an increase of 271,497 bbls. in sales of cut-back asphalts. In the Oklahoma-Kansas-Missouri district, an increase of 173,725 bbls. in sales of road oil was exceeded by the increase of 382,729 bbls. in sales of cut-back asphalts. In northern Louisiana and Arkansas, an increase of 121,265 bbls. in sales of road oil was accompanied by an increase of 40,766 bbls. in sales of cut-back asphalts. No sales of cut-back asphalts were reported from the Texas Gulf Coast where sales of road oil increased 276,692 bbls. from 1935 to 1936. On the other hand, a decrease of 49,223 bbls. in sales of road oil by refineries of the Gulf Coast of Louisiana was more than offset by an increase of 212,168 bbls. in sales of cut-back asphalts; a decrease of 5,814 bbls. in road oil sales in the Indiana-Illinois-Kentucky district by an increase of 267,630 bbls. in sales of cut-back asphalts; and a decrease of 6,406 bbls. in road oil sales in the Rocky Mountain district by an increase of 93,682 bbls. in sales of cut-back asphalts.

Of the road oil sold in the United States in 1936 only 617,079 bbls., valued at $991,400, were made from foreign petroleum imported from Venezuela and Mexico. Of the road oil made from foreign crude, 89 per cent was sold by refineries of the Atlantic seaboard in 1935 and 79 per cent in 1936; the remainder was made in Gulf Coast refineries of Louisiana and Texas.

Petroleum refineries in the United States reported the production of 7,397,868 bbls. of road oil in 1936, compared with 6,030,491 bbls. in 1935. The refinery output of road oil was augmented in 1936 by 1,096,583 bbls. of other petroleum products, chiefly fuel oil, transferred to road oil stocks, compared with 1,399,656 bbls. similarly transferred in 1935. Stocks of road oil and of transferred oils held at refineries increased from 739,605 bbls. (revised figure) on December 31, 1935, to 851,035 bbls. on December 31, 1936. Consumption of road oil at refineries in their own operations, transfers, losses, and adjustments took 126,327 bbls. during 1936, compared with 555,457 bbls. (revised figure) in 1935.

Electric Power for Operating Oil Field Water Systems

By K. K. KREAMER
Houston Light & Power Co.



Field water-pumping installation with weatherproof motors and controls

A dependable water supply has always been a factor of prime importance in the development of any civic or industrial enterprise. Many cities, towns and industries have either prospered or declined in direct relation to the supply of water. The petroleum industry has been no exception to this rule as the cost and reliability of a water supply have often been deciding factors in the rapid and extended development of numerous oil-producing areas. Even though the source of supply be entirely adequate, the dependability of the system can be no greater than that of the prime mover of the machinery which delivers the water to the point of use. Here it is that electric power with its great dependability has come to play such an important part that today we find it a common practice among oil producers to purchase electric power for the operation of water pumping equipment.

Too much emphasis cannot be placed upon the necessity for an unfailing water supply for oil field drilling operations. A heavy-duty, steam rotary rig will consume on an average of approximately 2,000 bbls. of water per day and, where a large number of rigs are in operation, the supply required reaches major proportions. Although the cost of supplying water may be small, the loss sustained by a failure of supply may be very great. A stuck drill stem, shutdown time and incorrect mud quality in time of emergency are some of the losses that might result from lack of water. Whether the supply comes from wells or from streams or lakes, it must be pumped to the rig by such means as can be relied upon at all times.

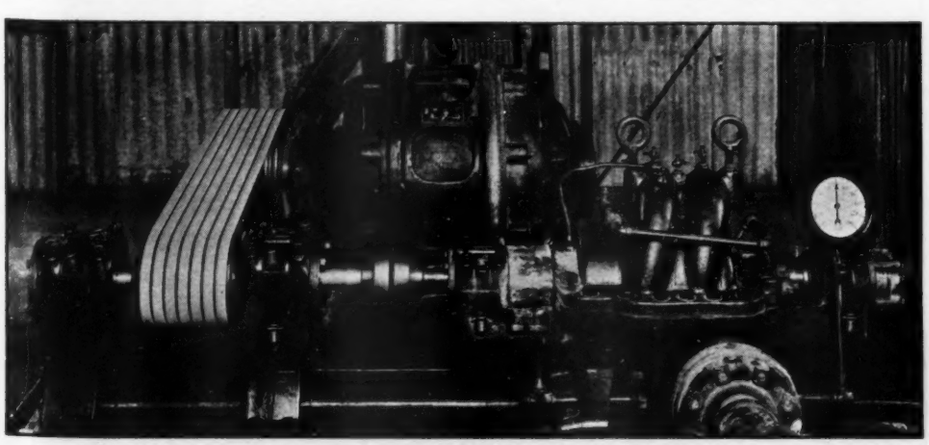
One operator on the Gulf Coast has installed a number of water systems which are semiautomatic in operation and on which attendance labor is reduced to a minimum. In this type of system, water is secured from wells which produce from a depth of approximately 500 feet, the water level standing within 50 feet of the surface. The water is lifted to the surface by a turbine-type, deep-well pump which is powered with a 15-hp. vertical motor directly connected to the pump shaft. This pump discharges into a 1,000-bbl. steel tank located adjacent to the well and by means of a float switch control in the motor circuit the pump is started and stopped automatically at such intervals as necessary to maintain the water level in the tank at a predetermined height. Water is pumped from the tank, into the field lines serving drilling rigs, by a centrifugal pump which delivers 250 gallons per minute at 200 pounds pressure and is direct connected to a 40-hp., 3,600 r.p.m. motor. This motor is full-voltage across-the-line start type and is operated by manual control equipment. Located directly over the well is an elevated tank of 500 bbls. capacity which serves the campsite. Water is pumped from the 1,000-bbl. tank to the elevated tank by a 3-hp. electric pump which is also controlled by float switch equipment. All motors and controls on the installation are of weatherproof type design which requires no buildings or housings.

Another type of installation which is often used is similar to the above described plant except that it has no automatic features and the tankage is different. Here again, the water is produced from a well and is lifted by an electric turbine type, deep-well pump and discharged into a large earthen reservoir. The well pump generally operates continuously in order to maintain a surplus supply in the reservoir in case the rate of withdrawal from the reservoir by the centrifugal line pump is greater than the capacity of the water well. The control equipment is located in a small building which in some instances also serves as tool room and office for gaugers and pumpers working on nearby leases.

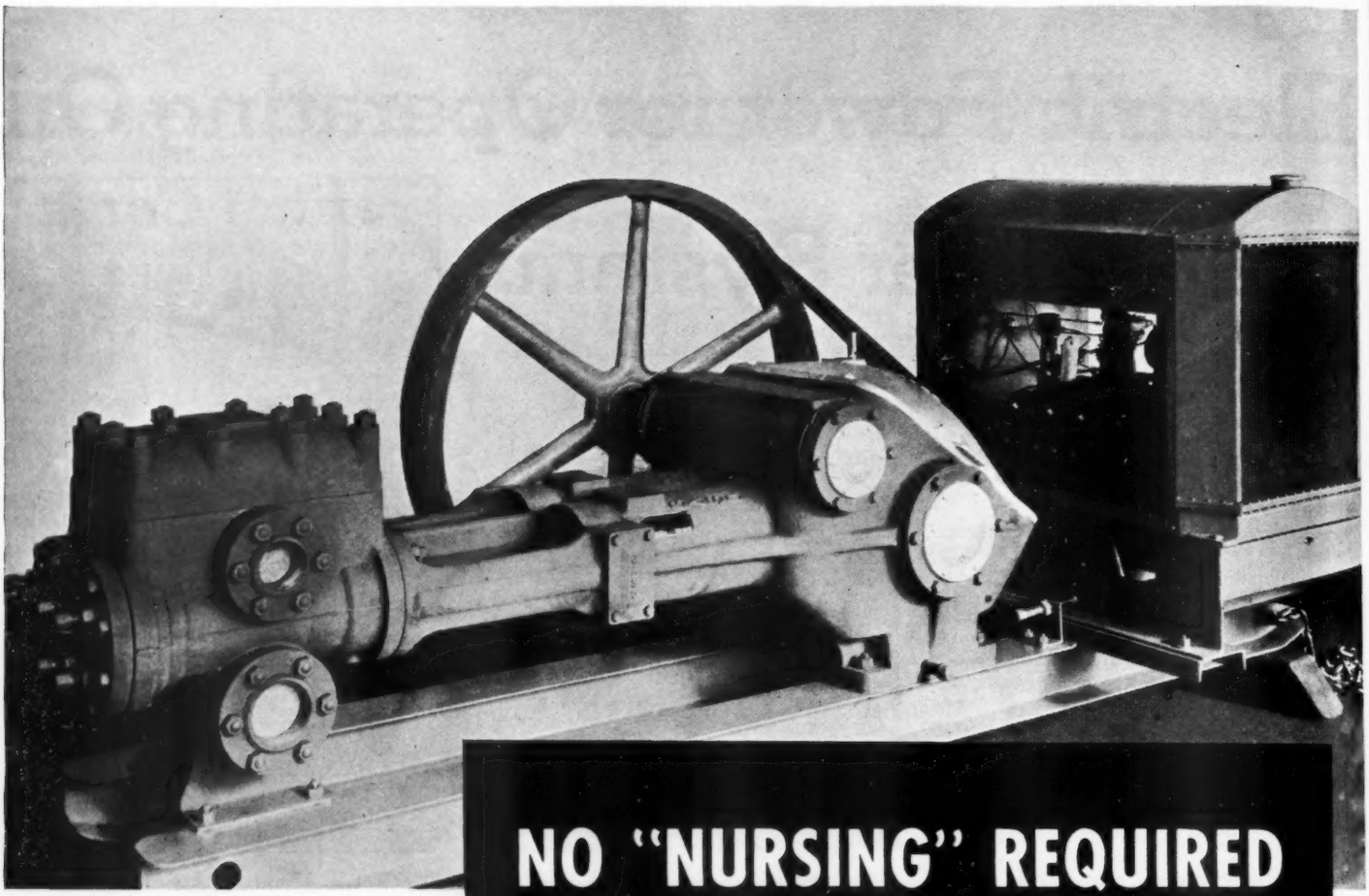
In many Gulf Coast fields, an adequate water supply may be obtained from nearby rivers or canals. General practice is to locate a motor-driven centrifugal pump at the shoreline from where the water is pumped into the field lines or into reservoirs scattered throughout the field. One interesting installation is that employed by a Louisiana operator near the Mississippi River. The river water carries silt in such amount that it is necessary to pass the water through a series of settling tanks to remove the suspended matter. A deep-well pump driven by a vertical motor is located on the ship dock in the river and discharges the river water into an earthen settling tank; thence, the water is siphoned into a second and third tank. Water in the third tank is sufficiently clear to be fit for boiler use and is transferred into the field lines by a motor-driven centrifugal pump.

Still another method of producing water wells in oil field service is that of air-lift. Countless numbers of motor-driven compressors ranging in size from 5-hp. up are in use in many fields and due to their portability and simplicity of installation have always been popular.

For any type of power to rank as a desirable prime mover certain qualifications are necessary. These qualifications may be considered from two general viewpoints; that is, from an operating standpoint and on the basis of economics. There are certain features of electric drive which have a particular bearing on field operations. Motors require little attention and maintenance; greater flexibility may be obtained through the use of remote-control equipment, and they will withstand comparatively heavy temporary loads. An electric



Water system pump belt-driven by a 50-hp. motor



Gaso Duplex Piston Horizontal Enclosed Type Power Pump equipped with TIMKEN Bearings on the pinion shaft and main shaft.

NO "NURSING" REQUIRED

Oil field operators are not deliberately neglectful of their equipment, but because of the conditions surrounding its operation oil field machinery often is denied the attention given equipment working under more favorable circumstances.

This situation is particularly trying for bearings as a large share of responsibility for efficient and dependable performance rests upon them.

TIMKEN Tapered Roller Bearings have been extremely successful in meeting oil field requirements in all kinds of equipment over a long period of years—so successful that they are now the oil industry's most popular bearings.

Their presence in the equipment you buy is a sign of protection against friction; wear; radial, thrust and combined loads; and misalignment of moving parts. The more TIMKEN Bearings the greater the protection.

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

Tapered Roller TIMKEN BEARING EQUIPPED

A symbol of quality for any piece of equipment with which it is associated

TIMKEN
TAPERED ROLLER BEARINGS

Manufacturers of Timken Tapered Roller Bearings for automobiles, motor trucks, railroad cars and locomotives and all kinds of industrial machinery; Timken Alloy Steels and Carbon and Alloy Seamless Tubing; Timken Rock Bits; and Timken Fuel Injection Equipment.

motor has the characteristic that it will carry the rated capacity load at constant speed. These questions might be asked: What advantage is such a characteristic for water pumping service; whom does it benefit and of what value is it? To the pump manufacturer it means that a pump designed to have certain characteristics, if equipped with electric drive will, when operated by the purchaser, have full opportunity to perform as intended by the designer and fulfill the conditions for which it was guaranteed. This, in turn, means a satisfied customer. To the user of the pump it means that he can depend upon the machine to deliver results in the capacity for which it was selected. This means the insurance of anticipated performance.

From the economic point of view we find that the centrifugal pump driven by a high-speed motor costs less per barrel of capacity and that foundation requirements are small; consequently, lower investment and installation costs. Here again, the feature of medium requirements in attendance and maintenance labor means lower operating costs. A study of the records of operators who purchase electric power for water pumping reveals that the expenditure for power for a system of sufficient capacity to supply the requirements of a number of steam-drilling rigs will range from $1 to $2 per day per rig; depending upon the volume and pressure required and the amount of power being purchased in the field by the user.

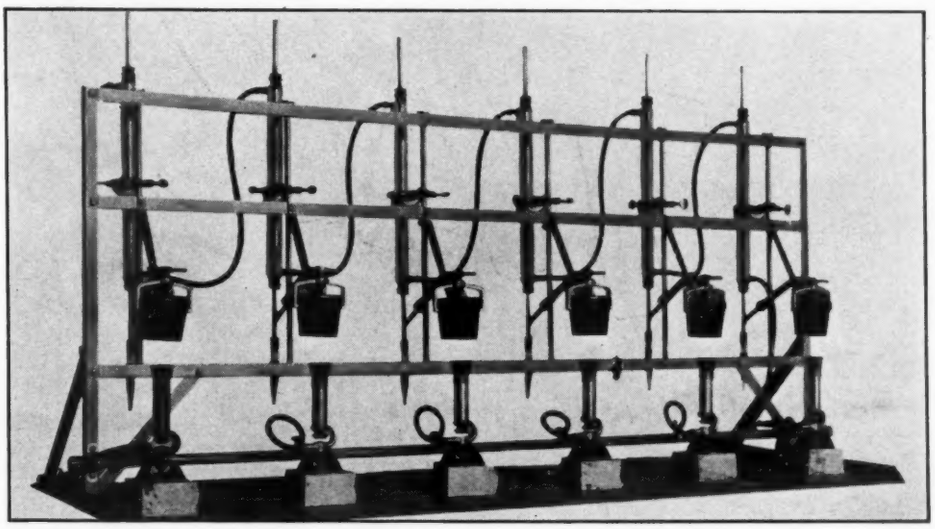
In summation, it may be said that the practice of purchasing electric power for the operation of a water system means to the lease owner that investment and installation costs will be a minimum, and that a task of vital importance has been placed in capable hands and will be performed in a dependable manner at a cost equal to almost an insignificant percentage of the total cost of the project. To the drilling contractor, it means that, in a field where water is furnished by an electric system, he can take a job without fear of shutdown from failure of the water system. To the lease owner furnishing water to contractors, it means that he will experience no trouble in fulfilling his obligation to the contractor. Of interest to the executive is that by the purchase of power requirements, he will be relieved of certain supervisory duties which time might well be spent on other phases of the business.

Battery of Retorts Determines Oil, Water Content of Cores

An improved method for determining the oil content of producing sands has been installed in the Ginter Chemical Laboratory in Tulsa, the basic design following that outlined by Howard C. Pyle, Union Oil Co. of Los Angeles, Calif., in the November 12, 1936, issue of The Oil and Gas Journal, page 153.

In operation, from 100 to 200 grams of oil sand under investigation are poured into one of the iron retorts.

The quantity of sand taken for investigation is dependent upon the quantity of oil assumed to be present. After the sample has been accurately weighed and placed in the retort and all connections made between the retort and the condenser, the bunsen burner is lighted under the retort and heating is started. Obviously, water will distill off as well as the oil. Often the water determination is as important as that of the oil. To prevent atmospheric water from increasing the reading, a calcium chloride tube is used at the outlet of the condenser. An asbestos board stands between the burner and the condenser when the test is proceeding.



Battery of retorts for determining the quantity of oil and water contained in core samples of producing sands. The essential equipment includes the retort, condenser and centrifuge tube in addition to the burner

After the sample has been undergoing heating for approximately one hour and all of the oil and water is removed from the sample by distillation, the collecting tube, shown attached to the lower end of the condenser is removed and is centrifuged in order to separate the oil and water. Obviously, the reading on the centrifuged tube provides the quantity of oil and water contained in the original sand sample and since the weight of the sand is known, the relative quantities of oil and water, each contained in the sand sample may be calculated.

A typical determination on a composite sample of six Bartlesville, Okla., sand cores is outlined below. On retorting, water recovery was about constant, the loss varying from 0.1 to 0.2 cc. after correcting for the water of hydration. The receiving tubes are centrifuged and the volumes noted.

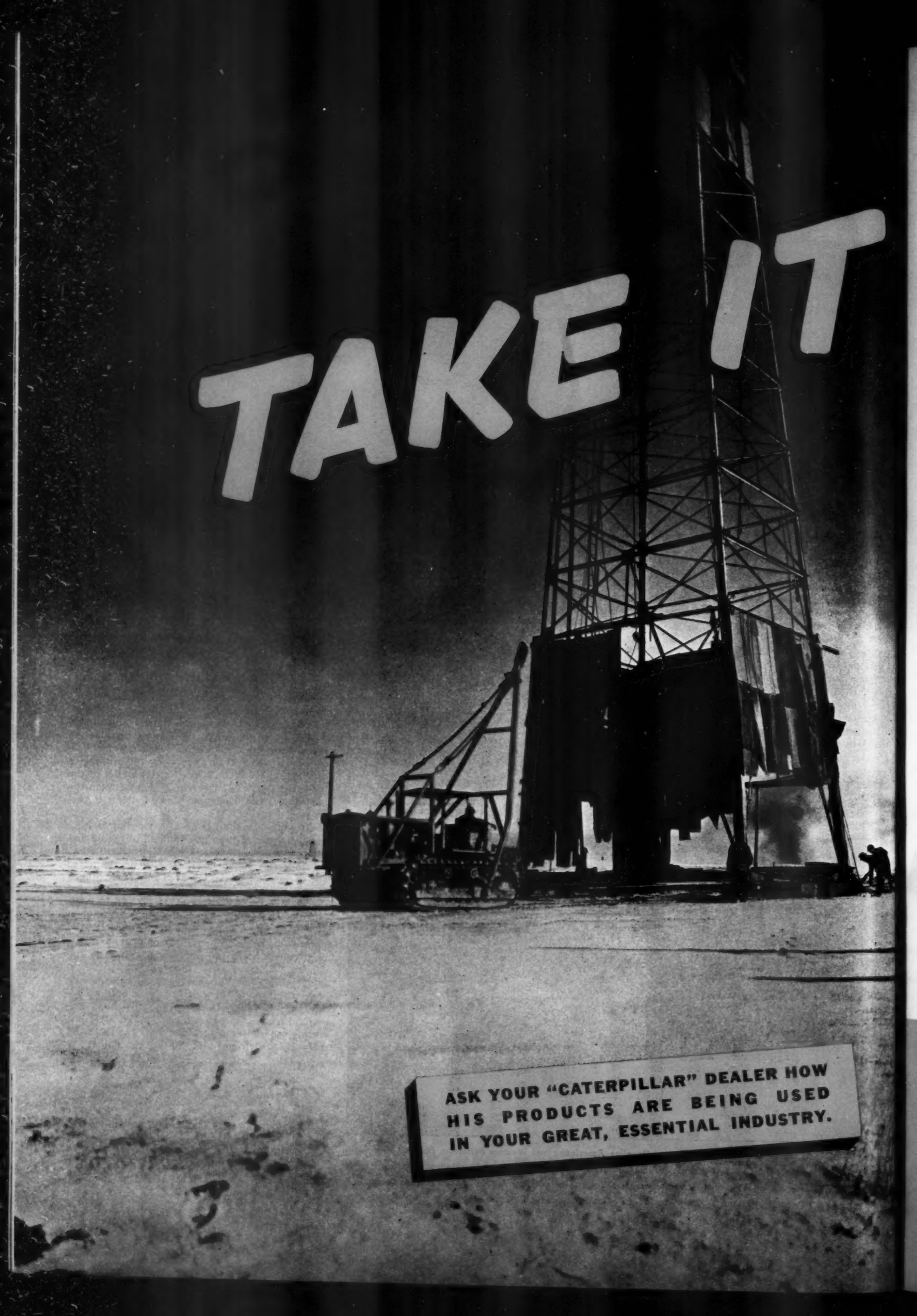
ANALYSES OF BARTLESVILLE CORE SAMPLES

Charge to retort 33½ A.P.I. crude cc.	Water cc.	Oil recovery at condenser receiver cc.
3 0	2 0	2 5
4 0	2.7	3 6
6 0	4.0	5.5
8 0	5.3	7.2
10 0	6 7	9 2

A correction graph is constructed for each character crude to allow for coke, fixed gas and the hold-up of the retort system.

CHECKING ONE OF THE CARS USED IN VAPOR-LOCK TESTS

As a combined program of research the Natural Gasoline Association and Western Petroleum Refiners Association are investigating the vapor-locking tendencies of motor fuels. Road tests on at least 10 standard cars are now in progress. Here are shown some of the close observers of these tests including V. E. Middlebrook, Rhea Couch, R. E. Baker, T. W. Legadski, R. C. Alden and W. F. Lowe


TAKE IT
ASK YOUR "CATERPILLAR" DEALER HOW
HIS PRODUCTS ARE BEING USED
IN YOUR GREAT, ESSENTIAL INDUSTRY.

AWAY DIESEL!

AT THE Lance Creek oil field in Wyoming, this "Caterpillar" Diesel RD8 Tractor, equipped with Hyster towing-winch, proves its ability to "move everything but the hole." Here it is skidding a rotary oil rig one mile, in some places by direct pull, in others using the power-winch. "Caterpillar" Diesel products are used in the petroleum industry for:

TRANSPORTATION

Moving drilling equipment and derricks from location to location in good going and bad, spotting equipment where it belongs.

PRODUCTION

1. Tractors fitted with well-servicing winches pull and run rods and tubing; do bailing, swabbing and cleaning out.
2. Skid-winches powered with "Caterpillar" Diesel Engines do same work as listed just above. Diesel Engines are also used on pumping.

DRILLING

Heavy-duty, dependable "Caterpillar" Diesel power operates cable tool outfits, rotary rigs, and slush pumps.

PIPE-LINE

1. Ditchers are powered with these engines.
2. There are pipe-line side-boom tractors for stringing, stabbing and laying.
3. Pipe-line backfilling tractors for backfilling into ditches.
4. Engines for pumping.

CATERPILLAR REG. U.S. PAT. OFF. **TRACTOR CO.**

PEORIA, ILLINOIS

WORLD'S LARGEST MANUFACTURER OF DIESEL ENGINES, TRACK-TYPE TRACTORS AND ROAD MACHINERY

QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph.D., Technical Editor

Liquefied Butane Used for Making Domestic Fuel in United States

I am informed that butane is being used for making domestic fuels, mixed with air, in the United States and wish to know what is the extent of the business and what is the heating value of the fuel as delivered?—M. C. E.

Sales, or the marketed production, of liquefied petroleum gases for domestic, gas company, and industrial uses, reached 106,652,000 gallons in 1936, according to reports submitted to the United States Bureau of Mines, Department of the Interior.

The industrial use of liquefied petroleum gases was outstanding in 1936 when 67,267,000 gallons or 63.1 per cent of all deliveries fell under this classification. The domestic use of liquefied petroleum gases increased 30,014,000 gallons in 1936, a gain of 40.4 per cent over 1935. The quantity used in gas manufacturing increased from 7,581,000 gallons in 1935 to 9,371,000 gallons in 1936.

The American Gas Association has furnished the Bureau of Mines the following data regarding the distribution of liquefied petroleum gases:

"At the end of 1936, liquefied petroleum gas was being delivered through mains to consumers in 178 communities in 30 states by 72 companies supplying 31,300 customers.

"Butane-air gas with heating value ranging from 520 to 900 B.t.u. per cubic foot was supplied to 124 communities in 28 states by 60 companies. A mixture of undiluted butane and propane gas with a heating value of 2,800 to 3,000 B.t.u. per cubic feet was supplied to 14 communities in California and Nevada by six companies. Undiluted propane gas with a heating value of 2,550 B.t.u. per cubic foot was supplied to 40 communities in Maryland, Minnesota, New Jersey, North Dakota, Virginia, and Wisconsin by five companies."

Butane was used as an industrial fuel to the extent of 47,455,000 gallons in 1936 compared with 34,084,000 gallons in 1935. Sales of butane to gas manufacturing plants were 6,227,000 gallons in 1936; deliveries for domestic purposes registered a 100 per cent gain over 1935, to 2,956,000 gallons.

Production of Sweet and Sour Gas in the Texas Panhandle

Our company is very anxious to get figures on the sweet and sour gas reserves of the Texas Panhandle. I am sure that you can either give us these or tell us where they may be obtained.—W. G.

The Texas senate investigated in 1934, the conditions surrounding the production of natural gas in the Texas Panhandle. The report was considered during the week of Sept. 17, 1934. The material following is based on this report.

In the Panhandle field, 125 miles long and 20 miles wide, there are 1,550,000 acres; 982,324 acres producing sweet gas and the remainder sour.

The present production of gas averages 1,700,000,000 feet per day. The pipe lines transport about 450,000,000 feet; carbon-black plants burn about 450,000,000 feet, leaving nearly 1,000,000,000 feet which is blown into the air.

Estimates made for the committee indicated that there were in the reservoir originally 60 trillion feet of gas. Some 40 trillion feet have been produced, leaving an estimated 16 trillion feet in the ground.

Although the original rock pressures averaged about 430 pounds, this has declined to 380 pounds. In some areas the committee found that pressures had been depleted to 200 pounds.

The wasted gas, estimated at 1,000,000,000 feet per day, would be valued at $2,640 if converted to the 66,000 pounds of carbon black which it would make.

Recommendations: 1. That pipe line companies, casinghead plants, and carbon-black plants should be required to take ratably a sufficient amount of gas to meet the legitimate demands, and that all persons producing gas and oils should make correct reports to the railroad commission and to the comptroller, and that all parties in this field be restricted to a ratable production of gas, irrespective of waste, and that the landowners should receive just compensation for the gas taken from under their lands.

2. That a tax of one-half cent per 1,000 feet be placed on the production of natural gas in Texas.

5. In areas productive of gas containing a high content of hydrogen sulfide or other substance rendering it unfit for light and fuel usage, and where the cost of treating such gas for the removal of its objectionable contents is prohibitive, it is recommended special permits be granted to allow the use of such gas for the manufacture of gasoline and similar uses, and under no circumstances that the residue gas be blown into the air.

8. We recommend that there be levied and collected a tax of 2 cents per thousand feet upon all gas produced and sold at the well at a price of less than 4 cents per thousand feet.

9. We recommend legislation requiring all natural gas produced in Texas to be stripped of its gasoline content before moving more than 20 miles from point of origin in pipe lines.

Reference: Hearings before a Subcommittee of the Committee on Interstate and Foreign Commerce, House of Representatives, 73rd congress, Part 2, U. S. Govt. Printing Office, Washington, D. C., 1934.

CHEMICALS FOR THE PETROLEUM INDUSTRY

Carbon Disulfide

Use—Solvent for separation of bitumens and sulfur, and in recovery of resins, oils and waxes.

Form—Volatile water-white highly refractive inflammable liquid. Its vapors are toxic.

Formula—CS_2.
Specific gravity—1.293 at 32° F.
Boiling point—115° F.
Freezing point— —177° F.
Ignition point, spontaneous—284° F.

LIMITATIONS

Purity per cent	99.9
Objectionable foreign odors	none
Boiling range	110°-115°F.

Analysis of Pennsylvania Oil and Specifications for Base Motor Oils

If possible I would like to have tests as well as yields both before and after treating on Pennsylvania crude, including gasoline, kerosene, etc. I am especially interested in the tests and yields on the lubricating stocks. —W. C. D.

The properties of Pennsylvania Grade oil, as represented by a sample from the Bradford district, are given in the table.

BRADFORD DISTRICT OIL

Gravity, A.P.I. of the crude	44.3
Sulfur total	0.05
Gasoline per cent	36.00
Gravity, A.P.I.	64.4
I.B.P. °F.	92
Final B. P. °F.	370
Octane number	53
Kerosene per cent	14.00
Gravity, A.P.I.	46.2
Gas oil (distillate fuel) per cent	8 to 13
Gravity A.P.I.	35 to 40
Lubricating oil, per cent	5.70
Nonviscous, neutral per cent	1.6
Gravity, A.P.I.	31.5
Viscosity at 100° F.	110.0
Viscous neutral, per cent	4.1
Gravity, A.P.I.	30.2
Viscosity at 100° F.	180
Viscosity at 210° F.	45
Wax, per cent	1.2
Melting point, degrees F.	123
600 cylinder stock, per cent	19.5
Gravity A.P.I.	26
Viscosity at 210° F.	146
Loss, per cent	0.5

Slight differences in the yields of products and their properties are obtained according to refining conditions. Space does not permit a discussion of before and after treatment data, which vary for several reasons.

The Pennsylvania Grade Crude Oil Association has adopted minimum specifications for Pennsylvania Grade lubricating oils, for use as motor oils, which became effective March 1, 1933. This appears to be the guide now used when making blends for the several standard S.A.E. grades distributed by dealers under the emblem of the association. These are:

Neutral oil must not flash below 420° F. A minimum 5.0 viscosity of 180 seconds at 100° F., pour point 25° F. and A.P.I. gravity not below 29.5°. The bright stock is required to flash above 540° F., and have a color at least No. 8.

References: Smith and Lane, Analyses of Representative Crude Petroleums of the U. S., Bulletin 291, Bureau of Mines. Lane and Garton, Base of a Crude Oil R. I. 3279, Bureau of Mines.

Lubricating Oil Consumed in the Industries and in Motor Vehicles

How does the consumption of lubricating oil in automobiles compare with the gasoline required? Which is the larger consumer of lubricating oil, the industries or the automobile?—J. A. C.

The quantity of lubricating oil required by all motor vehicles is approximately 2.25 to 2.50 per cent of the gasoline consumed.

A recent report of the American Petroleum Institute states that the quantity of motor oil required is greater than the volume of lubricating oil used in lubricating the machinery of the country. In 1936 the cars and trucks required 22,000,000 bbls. of lubricating oil. This was about 2,000,000 bbls. more than the quantity used in the industries.

PROBLEMS FROM READERS

Edited by L. G. E. Bignell

Additional Data on St. Peter and Wilcox Sands

I was very much interested in your reply to S. W. T., Jr. regarding the correlation of St. Peter and "Wilcox" sands as published on the "Readers Problem" page in The Oil and Gas Journal of May 20. The following additional references are given covering data on the St. Peter.

Thiel, in his excellent article in the G.S.A. bulletin, refers to Dake's "The Problem of the St. Peter Sandstone," but I thought that "The Geology of Ste. Genevieve County," vol. 22, 2d. series, Missouri Geological Survey, 1928, might be of some help. This can be obtained from the Missouri Geological Survey, Rolla, Mo., for a cost of about 25 cents—this charge is to cover mailing costs.

In Thiel's paper, the map on page 567 contains two errors of very minor importance. Mention is made of them in a spirit of helpfulness to S. W. T., Jr., in order that he does not jump to the conclusion that Jasper and Vernon counties, Missouri, are excellent places to core drill the St. Peter because it is close to the region where the "Wilcox" is developed in the subsurface. A thickness of 85 feet is given in the general area of Jasper County, and a thickness of 93 feet is given in the area of Vernon County. These thicknesses were probably taken from U.S.G.S. Water Supply Paper 195 published in 1907, pages 122 and 135. At this time Shepard referred certain sands to the St. Peter. Unpublished studies by the Missouri Geological Survey have established the fact that Mississippian sediments rest on the Ordovician (Canadian System of E. O. Ulrich) in these areas in western and southwestern Missouri. To the north and east of Vernon County, the St. Peter is found in the subsurface, but it is very patchy in its occurrence.

I am sure that H. S. McQueen, assistant state geologist of Missouri, could give S. W. T., Jr., many helpful suggestions in regard to the occurrence and thickness of the St. Peter sandstone in that state. The survey has much unpublished subsurface data in the files at Rolla.

Does Vegetation Indicate Presence of Oil or Gas?

Can you tell me what geophysical system is used in U.S.S.R.? I understand one based upon the theory that the flora above lands where there is oil, is different from the vegetation on land that does not overlie gas or oil, is being used. What is the system called and is it dependable?—W. N.

We are not conversant with the various geophysical systems used in Russia and it is possible they have developed some method whereby the variation in growth of vegetation is correlated. There is nothing especially new in this idea for along the Gulf Coast in this country it has been known for many years that the density and type of vegetation growing above salt domes outlined the dome quite clearly. When pictures were taken from the air this fact became more evident and it is not uncommon practice now to take aerial photographs for the purpose of studying surface contours of structures.

Just how the geologist would proceed to actually map structure by studying the vegetation in a region is not known to us but it is general practice to make note of changes in type of vegetation, for different type soils best support different kinds of vegetable life. As the soil is simply eroded rock and in many instances lies directly adjacent to the original strata from which it has been reduced it is good practice to make note of soil changes as a clue to the geology of the area.

Cost of Shooting Wells

What is the approximate cost of shooting an average oil well? How much do they pay the shooter and what is the cost of materials?—H. G. K.

It is hard to decide what is "an average well" and you do not give location of this type well so the only answer we can give is to give you some representative prices for shooting wells in the Mid-Continent region.

In Arkansas, Oklahoma and Kansas the average shot is about 40 quarts and this will cost, without time bomb, about $125 per well. In Texas, New Mexico and Louisiana the average shot will be about 250 quarts and without bomb will cost $750 or at the rate of $3 per quart covering the explosive, transportation, shells and shooting.

The material prices are never segregated in quoting upon a shot so it will be hard to give you the detailed information you desire.

The average pay of shooters in the Mid-Continent area is now around $5 per day but most men are hired on a monthly basis of $150. Materials will vary but a standard price list is usually used and discounts allowed from it according to volume of business and other considerations.

Water Treatment for Bradford Field

What chemicals are used in water for flooding oil wells in Bradford pool? How much should be used in 100 bbls. of water and what would it cost?—J. F. W.

The answer to your question will be found in an article by A. S. Behrman, presented before the Pennsylvania State College on January 24, 1930, and published on page 248 of The Oil and Gas Journal of March 6, 1930. This deals with the purification of flood waters for Bradford field water-flooding projects and is quite complete. A more recent article on the same subject but treating of other than the Bradford field was prepared by A. C. Embshoff, with the International Filter Co., and published in the May 14, 1936, issue of The Oil and Gas Journal and entitled "Treatment of Waters and Brines for Flooding and Disposal Purposes."

In general waters used in flooding projects are treated with alum to remove the iron, lime to reduce hardness and perhaps some sulfuric acid to establish equilibrium when too much lime has been added. The treated water is usually passed through a filter before it is pumped to the input wells.

As to the quantity and price of this chemical treatment there is little definite that can be said because the quantity of chemicals will vary with the different waters and price accordingly. For information concerning costs we suggest you contact some chemical company and submit sample of the water you propose to use in flooding and have them advise you as to the quantity and character of the chemicals needed to treat it.

Power Costs for Lease Operations

I am interested in a comparison of costs between electric, gas and fuel oil power plants for lease operations. Can you give me some data on this problem based upon amount of connected load?—L. S. F.

To prepare base figures for such a comparison will be very difficult because operations will vary through a wide range and no two wells or leases would have similar power problems.

The use of electric power for lease operations is applied in so many different forms it is almost impossible to make any general statements because of the wide variations in efficiency of units. The wells may be pumped by beam units or by pumping units or central powers and either individual motors or one large motor used for the power requirements. Gas engines may be used and the gas supplied from wells on the property at no charged costs. Electric power may be purchased from power companies serving the district or may be generated in individual plants located at convenient places near the leases.

If electric power is used in individual motors the actual energy required as integrated on the lease meter will approach 40 to 45 per cent of the normal rating of the motor. Thus if a 40-horsepower motor is used the actual power consumption will be only 40 per cent of 40 or 45 horsepower rating or from 12 to 13.5 kilowatt hours per hour.

In the case of a central power motor pumping 10 wells which would require 5-horsepower motors at each well if pumped individually the central power plant will generally consist of a motor of about 60 per cent of the total horsepower required for the total number of individual motors. In this case a 30-horsepower motor would pump the 10 wells and operate under practically full load all the time, if the wells are balanced one against the other.

This does not answer your question in any detail but it will illustrate how complicated comparison of power costs for lease operations can be and we know of no set of formula that can be applied to the solution of this general problem.

Oil Production in Cuba

Will you kindly refer us to the name of a publication or book relating to the development of oil production in Cuba? We would also like to have figures on the amount of gasoline and fuel oil sold in Florida during 1936.—F. R. S.

The only published information we know of regarding oil developments in Cuba is an article by J. Whitney Lewis, consulting geologist, Apartado 744, Santo Domingo, Dominican Republic in the June, 1932, issue of the American Association of Petroleum Geologists' Bulletin, entitled "Geology of Cuba."

There are some other papers on Cuban geology published by the A.A.P.G. but the one above referred to seems to best cover this subject. As there is no commercial production in Cuba there is, of course, nothing published on development.

Motor fuel consumption in 1936 was 288,079,000 gallons in Florida. There are no figures on fuel oil consumption that we know about.

Proving

THE FACTS ABOUT BEARINGS AND THEIR LUBRICATION

A new machine developed by Gulf engineers—the first that will test bearings under precisely the operating conditions of actual service. It measures accurately friction, torque, temperature, wear and film thickness. Thus, new information is developed which is helpful in the manufacture of improved bearing lubricants.

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to many questions regarding bearing lubrication

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HOW can present day lubricants be further improved to anticipate future progress in bearing design and application?

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FIELD OPERATIONS

Summarizing the Week's Developments

A wildcat in Karnes County, Texas, was completed as a new pool opener, producing 46 bbls. of 45.7-gravity oil through choke in three hours. The Plummer field, Bee County, was extended to the southwest with a small producer. The Silsbee field, Hardin County, Texas Gulf Coast area, was extended 1,800 feet northeast with a 350-bbl. well. A new deep producing horizon was uncovered in the Old Ocean pool, Brazoria County. Deep tests in Hunt and Rusk counties, East Texas district, were abandoned and a test in the Opelika area, Henderson County, failed to find expected production in the Glen Rose formation. The new Wasson pool in Gaines County, West Texas, apparently was extended 2½ miles northeast by an outpost well that swabbed at the rate of 10 bbls. of oil an hour. New wildcats were announced for Nolan, Lynn and Loving counties.

ILLINOIS

A 1,617-bbl. well was completed by Wiser Oil Co. in Clay County, total depth 2,997 feet. Pure Oil Co. completed a 1,536-bbl. well at 2,987 feet, total depth, and a 166-bbl. well at 3,003 feet, both in Clay County. Two small wells were completed in Clinton County and one in Marion County. More than 100 operations were listed in the Illinois Coal Basin.

MICHIGAN

The North Buckeye area, Gladwin County, continued to set a fast pace in Michigan with eight oil wells completed the past week, three with initial yield of 1,200 bbls. daily or better. Wildcats in Isabella, Saginaw and Mecosta counties were abandoned.

KANSAS

Wildcat pool openers were completed near Ellinwood in Barton County and north of the Welch pool in Rice County. An old gas well in the Otis field, Rush County, was deepened and completed as a large oil producer. A 5,212-bbl. well was completed in the Theede sector, southern Rice County. Several large producers were completed in the Trapp field, Russell County.

OKLAHOMA

The wildcat that opened a pool southwest of Tecumseh, Pottawatomie County, was completed, flowing about 400 bbls. of oil daily. The Billings pool, Noble County, was extended a location to the north, and defined by a dry hole on the southwest. A large producer was completed in the North Wellston pool, Lincoln County. Ten producers were completed in the Fitts district, Pontotoc County.

NEW MEXICO

The third producer was completed in the Farney pool, Lea County, extending production slightly to the northeast. A new well in the Jackson pool, Eddy County, responded to acid treatment by increasing production from an estimated 200 bbls. of oil daily, naturally, to 200 bbls. in two hours after acidizing.

Completions in All Fields

(Week Ending July 31, 1937)

	Oil	Gas	Dry	Total	1937 total comp. to date	1936 total comp. to date
N. Y., Pa., W. Va.	81	18	16	115	2,373	1,753
Ohio	9	9	7	25	676	429
Indiana	0	0	0	0	49	99
Kentucky	3	0	1	4	295	133
Illinois	6	0	0	6	51	23
Michigan	11	0	3	14	491	410
Kansas	42	0	16	58	1,457	934
Oklahoma	44	0	15	59	1,677	1,520
Texas:						
North Central Texas	39	1	17	57	1,684	1,625
West Texas	45	0	9	54	1,564	838
Texas Panhandle	11	2	1	14	412	392
East Texas	48	0	3	51	1,295	1,631
East Central Texas	3	0	0	3	408	170
East Texas Border	5	0	1	6	232	43
Gulf Coast Texas	28	2	6	36	865	680
Southwest Texas	46	1	23	70	1,916	1,605
Total Texas	225	6	60	291	8,376	6,984
North Louisiana	9	3	4	16	349	397
Gulf Coast Louisiana	3	0	2	5	270	230
Total Louisiana	12	3	6	21	619	627
Arkansas	0	0	1	1	75	55
Montana	6	0	2	8	115	122
Wyoming	1	0	0	1	55	53
Colorado	0	0	0	0	6	16
New Mexico	6	0	0	6	441	328
Utah	0	0	0	0	1	5
California	22	0	10	32	893	649
Total United States	468	36	137	641	17,650	14,140
Total previous week	488	55	102	645		
Difference	20	19	35	4		

Outstanding Fields—Highlights

(Week Ending July 31, 1937)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
Amelia	3	8	5	1,127	70	4,307
Hastings	6	19	11	4,271	245	14,644
McCampbell	1	12	1	385	33	2,600
Saxet	6	35	7	1,100	506	35,300
North Sweden	1	13	4	850	24	1,400
East Texas	59	133	48	2,568	23,211	476,785
Talco	2	44	13	4,210	406	32,553
Ector County	20	86	19	19,022	535	22,100
Winkler County	13	55	9	8,226	1,343	44,250
OKLAHOMA						
Oklahoma City	0	6	0	0	1,132	153,750
Fitts	7	41	10	2,448	824	97,650
Billings Deep Sand	1	6	3	1,972	38	7,475
KANSAS						
Ellis County	7	36	2	1,065	148	7,430
Reno County	3	25	6	5,809	460	18,310
Russell County	8	61	10	8,930	783	35,341
Rice County	8	57	10	5,318	928	48,805
NEW MEXICO						
Lea County	36	105	5	1,054	2,245	106,420
LA-TEX-ARK						
Rodessa, La-Ark.	1	23	3	2,576	404	51,240
Rodessa, Tex.	6	17	5	1,360	318	38,640
Lisbon, La.	9	20	4	3,640	58	14,286
Jennings, La.	1	14	1	550	60	7,121
MICHIGAN						
Buckeye	14	92	11	7,200	186	16,272

Eastern Field Report

By STAFF CORRESPONDENT

SECOND ORISKANY WELL IN BEAVER COUNTY SHOWS GAS

PITTSBURGH, Pa., Aug. 2.—A second Oriskany gas well in Southwest Pennsylvania is indicated with a good showing of gas in the top of that formation in the test of John T. Galey and others on the Minnie Weigle heirs (Duff) farm in South Beaver Township, Beaver County. Top of the Oriskany was at 4,817 feet 6 inches and at 4,818 feet 9 inches there was a showing of gas which increased to 260,000 feet until drilling was stopped at 4,820 feet to run casing.

A string of 5-inch casing will be run and it will be cemented in after which the hole will be deepened, but the Oriskany will not be drilled through. This well is about 1 1/5 miles east of the Oriskany gas well on the William Graham (Charlotte R. Calvin) farm, same township. The Weigle heirs test is 7 feet higher on structure than the Graham well which topped Oriskany at 4,542 feet with a surface elevation of 906.93 feet, and which had a showing of water at 4,549 feet. The sand in the new test is remarkably soft.

Interest in deep drilling swings northward to a test now starting on the A. S. McCullough farm in Jefferson Township, Mercer County, where Petroleum Management Co. of Detroit, Mich., expects to drill to the Oriskany sand. It is located latitude 41 degrees 20 minutes 26 seconds, longitude 80 degrees 20 minutes 54 seconds and about 2.4 miles south 37½ degrees west of the bench mark at Big Bend.

A record of 52 completions was reported in the lower eastern fields during the week, of which 16 were dry, 18 gas wells, and 18 producers with an initial daily production of 206 bbls. Included was an interesting Oriskany gas well on the outside of the West Virginia pool and a dry deep test in Southeast Ohio.

SOUTHEAST OHIO

The deep test of Natural Gas Co. of West Virginia on the D. Deseliem farm in section 26, Wayne Township, Columbiana County, topped Oriskany at 4,411 feet and it was drilled through without a showing of gas. Corniferous lime was at 4,170 feet. One-half mile west of the Jenkins farm gas well, this company is down 1,500 feet on the J. C. Workman farm.

In Athens County, Gross & Frebault and others completed a test on the C. O. Lowry farm in section 31, Athens Township, near Fisher, in the Berea sand at 1,167½ feet. It produced 15 bbls.

In Hocking County, Kachelmacher Estate completed No. 4 Nelsonville Coal & Land Co., NE quarter of section 19, Ward Township, in the Berea sand at 920 feet, gauging 431,000 feet.

In Jefferson County, Costinia Oil Co. drilled a test on the Harry and Marvin Lee farm, NW quarter of section 34, Island Township, in the Berea sand at 1,481 feet. It was dry.

In Knox County, in the SE quarter of section 21, this township, Knox Exploration Co. drilled on the J. A. Upham farm through the Clinton sand to 3,091 feet and it is showing for only 1 bbl. In the SE quarter of section 4, same township, this company drilled on the Lester Crowthers farm through the Clinton sand to 2,868 feet and it was dry. In Clay Township, Knox County, J. B. Morpell and others completed No. 2 Murray Homestead in section 14, in the Berea sand at 799 feet. It will make a 2-bbl. pumper. Top of the sand was 724 feet.

In Licking County, Emerald Petroleum Co. and others completed No. 5 Mrs. Arlie Cochran, SW quarter of section 10, Fallsbury Township, in the Berea sand at 772 feet, as a 2-bbl. pumper.

In Medina County, V. A. Geisinger completed a test on the fee farm, Tract 9, Lot 10, Chatham Township, in the Berea grit at 460 feet. It produced one-quarter barrel. In this township, Tract 13, Lots 2 and 3, Oko Oil & Gas Co. drilled No. 72 Henry Essig through the Berea grit to 409 feet and it was dry.

In Morgan County, A. M. Hummel and others drilled on the F. J. Strode farm 4 miles northwest of Chesterhill in section 30, Marion Township, through the First Cow Run to 228 feet and it was dry.

In Muskingum County, Pure Oil Co. completed No. 22 George Madden farm No. 1 in Licking Township in the Clinton sand at 2,996 feet. It is showing for 80 bbls.

In Washington County, J. L. Bachelor completed a test on the Edward Sheets farm 1 mile west of Dale, Lot 1,098, Wesley Township, in the Peeker sand at 537 feet. It produced 2 bbls. after shot. Near Archers Fork in section 34, Independence Township, Thomas H. Cisler completed No. 2 Seniour Duval in the Salt sand at 1,140 feet, gauging 143,000 feet. One-half mile east of Wolf Creek, Lot 1,066, Palmer Township, H. B. Walker, trustee, drilled No. 5 L. T. Hale through the First Cow Run to 597 feet and it was dry.

SOUTHWEST PENNSYLVANIA

The deep test of Potter Development Co., William E. Snee and others on the Indiana Savings & Trust Co. lease in Fairfield Township, Westmoreland County, has reached an interesting stage. After completing cementing in the casing in the Onondaga at 7,600 feet and letting it stand one week, the pressure was equalized on the casing keeping 110,000 pounds tension on the spider, and water was bailed out. With about 4,000 feet of water in the hole, the tools are drilling out the cement to deepen. When cased the test showed a gauge of 240,000 feet, and it will be followed closely for any gas increase.

On Chestnut Ridge, in South Union Township, Fayette County, this company is still at a shallow depth in No. 2 Summit Hotel. In North Union Township, Fairman, French, Barker, Hunt and others have rig completed on the Louis Varndell farm and will start this week.

In Hampton Township, Allegheny County, South Penn Oil Co. and others have reached 2,500 feet on the Christian Z. Schove farm. The Fourth sand was at 1,912-1,930 feet and the tools have probably passed through the Second Warren. In Lawrence County, the test of Carnegie Natural Gas Co. on the W. A. Currie farm is drilling at 1,650 feet.

In Mount Pleasant Township, Washington County, Norwood Johnston and others reached 100 feet below the casing bottom at 6,198 feet 8 inches and then struck three gas blowouts which stuck the tools for three days. Drilling has been resumed.

Completions

Two producers, two gas wells, and one dry hole were reported in Southwest Pennsylvania. In Amwell Township, Washington County, Union Gasoline & Oil Corp. completed deepening No. 5 A. O. Vankirk (790) at 3,158 feet. The Fifth sand was at 3,130 feet, with oil estimated good for 30 bbls. a day at 3,141-44 feet.

In South Franklin Township, Washington County, Lacock & Co. completed deepening No. 1 J. M. Hana at 1,213 feet. The Little Dunkard sand was at 1,145 feet, with about 4 bbls.

In Bethlehem Township, Washington County, William Potts & Co. completed No. 2 Ross Mowl at 3,056 feet. Gordon sand was at 2,705-55 feet with gas at 2,727 feet; Fourth sand at 2,786-90 feet with gas at 2,787 feet. The gauge is 120,000 feet and total depth carried it through the Elizabeth sand.

In Greene County, Northeastern Gas Co. completed a test on the J. W. McNichols farm in Springhill Township at 2,373 feet. Big Injun was at 2,287 feet with 92,000 feet of gas at 2,348-51 feet. In Gilmore Township, Duquesne Gas Co. drilled a test on the W. J. Lemmon farm through the Fifth sand to 3,503 feet and it was dry.

In Greene County, Milliken, Myers & Hoskinson will deepen on the Ruth Bane farm, in Morris Township, from 2,702 feet. In Springhill Township, Nelson M. Richard Co. has started drilling on the Rossell Sammons farm.

In Center Township, Greene County, South Penn Oil Co. is down 2,330 feet on No. 11 Samuel Harvey. J. B. Orndoff has reached 2,300 feet in No. 2 Mattie I. Scott and is running 6⅝-inch casing. Carnegie Natural Gas Co. is at 850 feet in No. 2 J. H. Orndoff. Manufacturers Light & Heat Co. is shut down cementing at 1,817 feet in No. 2 W. L. Fordyce.

In Franklin Township, Greene County, Manufacturers Light & Heat Co. is fishing at 2,950 feet on the C. C. Wood farm, Waynesburg Home Gas Co. is down 1,100 feet on the Marguerite Grover test, same township. In Dunkard Township, Convex Glass Co. is drilling at 224 feet on the VanVoorhis farm.

In Washington County there are several new locations. In North Strabane Township, McClelland & Co. are spudding on the McClelland Brothers farm. Keystone Gas Co. is building a rig for a test on the John Ross (Horner) farm. In South Strabane Township, the Manufacturers Light & Heat Co. is building rig on the Robert O. McKahan farm.

In Somerset Township, Washington County, Victor E. Behm & Co. have a rig on the J. D. Amos farm. In Nottingham Township, Robinson Brothers have a rig on the Frank Anthony farm.

In South Franklin Township, Washington County, F. K. Fawcett and others are cementing at 1,712 feet on the Tucker heirs farm. Carnegie Natural Gas Co. is down 1,260 feet in No. 3 M. C. Manon. Union Gasoline & Oil Corp. is drilling at 1,134 feet in No. 4 B. F. McClain and 2,667 feet in No. 2 W. B. Hazlett. The Gantz sand was at 2,615-45 feet with a show of gas. Dunn Mar Oil & Gas Co. No. 3 J. T. Baldwin is at 1,275 feet.

In Amwell Township, Washington County, Union Gasoline & Oil Corp. is rigging up No. 7 A. O. Vankirk. Equitable Gas Co. is spudding No. 3 S. E. Reese. Moore-Orrill & Co. are rebuilding rig for No. 4 Martha Hazlett after reaching 1,695 feet.

In South Strabane Township, Carnegie Natural Gas Co. has a location on the C. M. Guthrie farm. Emerald Oil Co. is drilling at 2,720 feet on the Mose Little farm. The Fifty-foot sand was at 2,715 feet with a show of gas. In Peters Township, Benedum & Trees are at 2,740 feet on the Mary Boone farm.

WEST VIRGINIA

There were several producers in West Virginia, the most interesting that of Carnegie Natural Gas Co. on the J. W. Hickman farm in Burning Springs district, Wirt County, which was drilled after finding oil in the shales in the deep test on the W. C. Patterson farm. In the Hickman completion there were oil shows at 2,213-23 feet, 2,497-2,507 feet, 2,597-2,605 feet and it is good for 10 bbls. a day with a total depth of 2,751 feet. These shales correspond to what may have been the Fifth or Gordon sands.

In Calhoun County, Jackson River Oil Co. completed a test on the Creed Yoak and Scott McDonald lease in Sherman district in the Injun sand at 2,049 feet, good for 5 bbls.

In Jackson County, Mountain Iron & Supply Co. completed No. 6 J. W. Kelley and others lease in Washington district in the Salt sand at 1,700 feet, good for 4 bbls. In this district, Lima Gas Co. drilled No. 3 B. F. Litton through the Berea sand to 2,400 feet and it was dry.

In Lincoln County, South Penn Oil Co. completed No. 8 Jennie A. Jones farm in Duval district in the Berea sand at 2,356 feet good for 1 bbl. a day. In Union district, the old Roy & McComas Mariah Farley No. 2, a

(Continued on Page 76)

Southwest Texas District

NEW FIELD AND EXTENSION OF OTHERS, BUT DRILL LAGS

By GEORGE WEBER

HOUSTON, Tex., Aug. 2.—One new field, extensions to others, and a few prospective showings in scattered wildcats resulted from the week's drilling in Southwest Texas. Although the volume of drilling has shown some decline, two areas, the Lower Gulf Coast and the Balcones fault zone, have seen little or no decrease in activity recently. The latter section particularly is now on the gain.

With independent operators supporting a mild boom in development of the Caldwell and Guadalupe counties sector of the Balcones fault line, another part of the chalk and lime producing belt seems due for intensive exploration. In the vast acreage under lease on ranches in Frio, Zavalla, Dimmitt, Maverick and La-Salle counties operations already are beginning or are projected for the near future. Success in any of the tests of that area will strengthen further exploration in the remote border counties.

Three Fields Active

The Lower Gulf Coast territory development centers in Nueces and Aransas counties, where the Saxet, Flour Bluff and McCampbell fields remain active. Smaller fields and wildcats support the heavy volume of drilling. The slump in drilling in the Laredo district continues, with the North Sweden field standing alone as an activity center. The counties between the Gulf Coast and the fault line are seeing some increase in drilling, incited largely by success in Karnes and Bee counties.

A Karnes County wildcat was completed during the week, definitely opening a new field, according to South Texas geologists. The Pettus Oil Refining Co. No. 1 McKinney made an initial production gauge of 46 bbls. of pipe line oil in three hours through quarter-inch choke to open what has been named the South Burnell field. The test cored Pettus sand at 3,648-53 feet, and following a drill stem test which showed 450 feet of oil, casing was set and the well brought in.

The test is flowing at a working pressure of 120 pounds, with a shut-in casing pressure of 400 pounds. The crude has a gravity of 45.7. A separate structure from the Burnell gas field to the north and the North Pettus field to the east makes No. 1 McKinney the discovery well of a new field. Already two tests have been staked for further development of the new area. Dirks Bros., veterans of operations in the Beeville sector, have staked No. 1 Ruhmann, 1,000 feet northwest of the discovery well, and Luling Oil & Gas Co. will drill No. 2 Boyce in the northeast offset position. Both tests are to begin immediately.

Plummer Field Extended

To the south in Bee County, the Plummer field was extended slightly to the southwest when the Ann Oil Co. No. 2-B Smith came in making 30 bbls. per day on a one-eighth inch choke. West Tuleta also gained a new producer in Salt Dome Oil Co. No. 2 Tuleta Mercantile Co.

The southwest section of the fault line zone came into prominence during the week with the announcement of several important wildcat tests. In Dimmitt County, H. F. Wilcox, who holds several hundred acres under lease on the Light ranch, moved on two new wildcat locations. Nos. 2 and 3 Light Ranch, in sections 29 and 113 respectively, are getting under way, and they will be watched with interest by companies holding acreage in the area.

In addition Paul Teas and the Maryland Corp. are moving a rig on the No. 1 McKnight, a wildcat located in section 23. This test will be an Edwards lime test, scheduled to go 7,500 feet. All three of the new Dimmitt County wildcats are on the I.&G.N.R.R. Survey.

Maverick County attracted attention last week, when an old abandoned wildcat was discovered to be flowing oil at the reported rate of 100 bbls. per day. The test, drilled several years ago on the Rycade Prospect, was abandoned because of mechanical troubles. Following leasing and geophysical activity in the county, the Wellington Oil Co. has announced location for the No. 1 Chittam, to be drilled in section 129 on the Chittam ranch. The test is contracted by Allen & Morris for 6,000 feet and will go to the Lower Glen Rose formation.

Discovery Well Reworked

Meanwhile, to the east in Zavalla County, the H. F. Wilcox Oil & Gas Co. recompleted the No. 1 Gilliam, discovery well of the Batesville field. The test, originally completed several weeks ago for a large initial production, has been reworked. Total depth is 3,949 feet. On a 24-hour test, a flow of 1,200 bbls. of fluid, including 40 per cent oil, was reported. The well will resume pumping after a short shut down.

Frio County activity is lagging, with little work in the Pearsall field. On the county's two wildcats, one, Pagenkopf & Jamieson No. 2 Blackaller, was abandoned at 3,270 feet in the Buda lime.

A tight well in San Patricio County holds the attention of Lower Gulf Coast operators. The Danrey Oil Co. No. 1 Jean Davis, authentically reported bottomed at 6,606 feet, apparently is having indifferent success at finding commercial production. The testing of sulfur water and a little oil is reported, although not confirmed by the company. Casing was set on bottom and perforated, and tankage was erected. Latest observations of the wildcat operations, however, show that tubing is being pulled, possibly for another perforation test.

Located less than a mile to the southwest of the No. 1 Davis, the Humble Oil & Refining Co. No. 1 McCampbell was abandoned at a total depth of 7,215 feet. Gas shows were encountered in sand at 7,067-72 feet, but tests at that level were unsuccessful.

The McCampbell field of Aransas and San Patricio counties continues one of the most active in the area. One completion was reported, with several tests on the lower sand at 7,110 feet and others beginning.

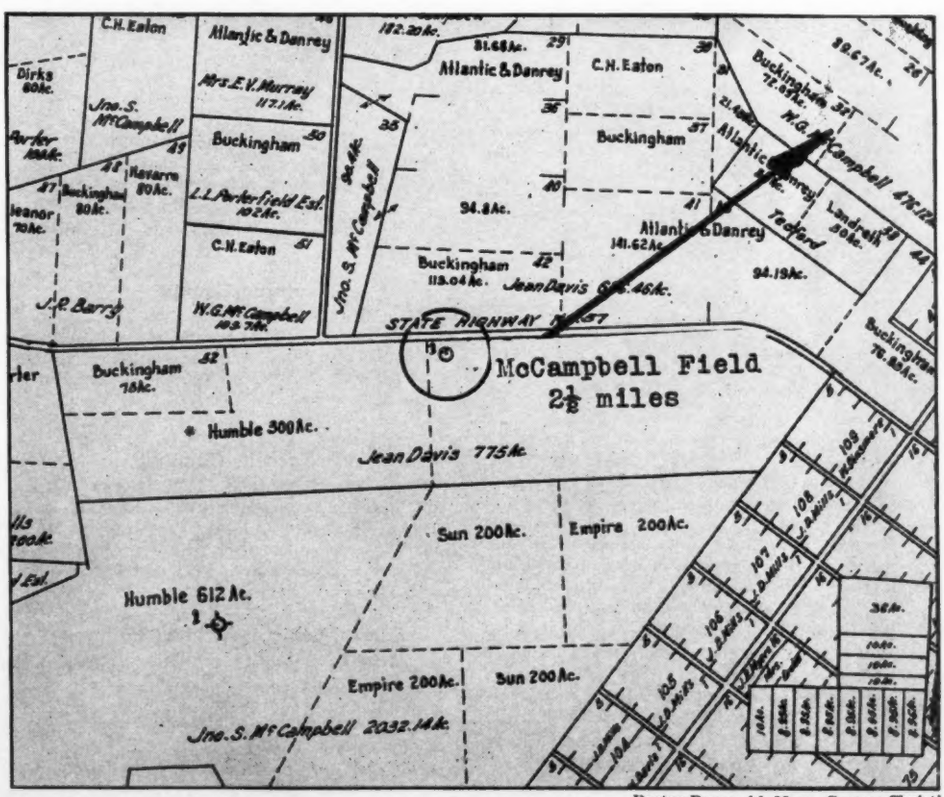
Flour Bluff Field Defined

In Nueces County the Flour Bluff field was defined for the first time since its discovery by the abandonment of the Humble Oil & Refining Co. and others No. 1 Graham & Moulter in Block 16, section 41. The test, southwest of production in the field, and near Oso Creek, tested salt water in sand at 6,756-71 feet.

The Saxet field of the same county gained seven new producers, in five sands of the prolific structure. One test, Port Oil & Gas Co. No. 3 Cox & Cryer, south of Clarkwood, near the old Stamex No. 1 Loraine producer, was abandoned, defining shallow production in that section.

The Laredo district showed few new developments during the week. North Sweden, the most active field at present, was enlarged by the completion of four

(Continued on Page 68)



Porter Regenold, Maps, Corpus Christi

Attention is focused on the Danrey Oil Co. No. 1 Jean Davis, 2½ miles southwest of the McCampbell field, and 1 mile northeast of Humble Oil & Refining Co. No. 1 McCampbell, wildcat abandoned this week

Michigan Field Report

By
O. C. PRESSPRICH

WICKLUND POOL ADDING TO SOARING OUTPUT OF STATE

SAGINAW, Mich., Aug. 2.—Despite recent slashes in crude oil prices, which brought cuts of 15 cents in grades from all Michigan fields, the North (Wicklund) pool in Buckeye Township, Gladwin County, continued to add to mounting production the past week with eight wells reported at more than 6,500 bbls. daily potential, either natural or after acid treatment.

Three of the North Buckeye wells were reported at better than 1,000 bbls. daily to again grab the spotlight of operations from the South (Oard) pool, which last week topped its consistently prolific neighbor.

The South pool added only 700 bbls. daily to its potential production the past week, with several tests scheduled to be brought in over the week-end. Southern pool operators anticipate a new flurry of activity with preliminary motions of a boom in that field apparent and rumored.

Wicklund (North) Pool

Eight North Buckeye wells were completed this week to continue the boom development of this field, which brought in three wells, reported at better than 1,200 bbls. daily each.

Top honors in production of the week went to Mammoth Producing & Refining Co. No. 5 Ockerman, SE NE NW section 11, with an initial of 1,200 bbls. Two other top producers, one of which exceeded the Ockerman well, came in after acid earlier in the week. One was Rex Oil & Gas Co. No. 4 Jacab, NW SE NW section 11, which developed 1,500 bbls. daily, and the other J. V. Wicklund Development Co. No. 4-K State, NW SW SE section 3, which developed 1,200 bbls. daily.

This latter well is significant with its heavy production, because it is a southeast diagonal offset of the Mammoth Producing & Refining Co. No. 2 Manyet, SW NE SW section 3, the northwest boundary well of the North pool. The Mammoth boundary well developed a 500-bbl. production, after acid, jumping output from 240 bbls. naturally. The Wicklund No. 4-K State, which more than doubled the production of the northwest boundary well, may result directly, operators said, in a drilling flurry to the east of the latest Wicklund addition to the northwest field. Territory to the eastward is practically undeveloped in comparison to other localities of the field.

Mammoth's No. 5 Ockerman in section 11, credited with the highest natural flow of the week, was reported bottomed at 3,632 feet, 86 feet into the Dundee.

Secured Best Well

Sun Oil Co. continued profitable development of its prolific Raab lease when it brought in No. 5 Raab for an initial production of 880 bbls. daily in NE NE NE section 10. The well initialed the second best of the week, although two acidized wells topped its production. The addition of this well, at a time when the northwest boundary wells of the North pool continued to push the field in that direction with good showings, continues to indicate the northwesterly trend. Nowhere in the other direction has such promising developments been found.

Michigan Producers & Refiners Corp. acidized its No. 3 Francis, NW NW NW section 14, and increased production to 650 bbls. daily. The well is a southwest extension of the North field, although not considered an outpost.

Franklin Petroleum Co. continued to add to the new undrilled locations in SW NE NE section 11 with No. 3-A State, which developed 329 bbls. initially.

In SE SE NW section 12, one of the eastern borders of the north discovery pool, Socony-Vacuum Oil Co. No. 3 Dailey gave an initial of 275 bbls. daily.

Several wells were reported about to enter the pay streak this week with further producers expected in the sector momentarily.

Oard (South) Pool

With operations of the Midway pool opened by the Hanners "tattle-tale" well in section 25, and blocked recently to the north and west by dry holes, the Midway area consequently becomes a north extension of the South (Oard) pool, due to its closer proximity, and the apparent dry gap lying between it and the North pool.

Temporary misfortune attended a west-edge test in the Midway sector this week when C. F. Caldwell No. 1 Hostettler, SE SE NE section 27, was forced to postpone drilling. The rig caught fire and burned, damaging the derrick, when the well was approaching the Dundee below the 3,200-foot level. No one was injured. This well is the most westerly test in the Midway sector, or more fittingly could be termed a northwest extension to the South (Oard) pool. Operations are to be continued as soon as repairs are made.

Leading the South pool producers of the week is Clark & Johnson No. 7 McMahon, SE NW SW section 36, which was completed with a natural production of 400 bbls. this week. The well seems to assure a continued southeasterly development of the field at the near limits of the township.

Beaver Trust No. 1 Havens, NW NW NW section 36, developed natural production of 150 bbls., and Garfield Petroleum Co. No. 3 McMahon, SW SW SW section 36, likewise came in with 150 bbls.

In an attempt to extend the north limits of the Oard pool from the discovery well, Mammoth Producing & Refining Co. No. 1 Oard, SW SW NW section 25, plugged back from a depth of 3,640 feet this week and is to be acidized. There was a small show of oil in the hole when decision was made to treat it. The well is four locations north of the discovery well.

Billings Township

Gordon Oil Co. was reported to be completing No. 1 Ashley, NW NW NW section 4, Billings Township, after a favorable showing of gas and oil in the hole. The well is the first of several tests in the Billings field to reach pay.

Huron County

The drill in the Haldane wildcat, 5 miles southwest of Bad Axe, up in the thumb of Michigan, was reported at a depth of 2,350 feet, with expectations of reaching the Dundee sandstone at about 2,800 feet. Charles W. Teater, driller, reported a showing of gas at about 1,800 feet.

Tuscola County

Another thumb-of-Michigan wildcat is going down on the William Dairymple farm in section 35, Arbela Township, Tuscola County. The drill has passed the Berea sand and is at about 1,500 feet. Drillers report the structures running higher than in a dry hole drilled about a year ago less than a mile from the present test.

Some Michigan Wildcat Failures

Four wildcat efforts in various Michigan oil fields apparently were headed for failure, with three definitely abandoned and the fourth moving downward to deeper formations in the hope of striking a pay stratum.

In Vernon Township of Isabella County the Charles A. Rolph Co. drilled No. 1 Cope, SE SE NE section 9, to the Dundee without trace of pay. Operations were suspended 81 feet in the Dundee at a depth of 3,810 feet. Operators had hoped to find in the Cope well another Midway well between the Currie discovery well in section 5 and the proven Vernon field. Failure probably will mean cancellation of other projected drilling in this sector.

Saginaw County developed another failure in James Township, when Darke Brothers No. 1 Hart, NE NE SW section 11, developed water in the hole in the Dundee. Plugging orders were issued.

Mecosta County chalked up the third failure of the week in Sheridan Township when Daily Crude Oil Co. No. 1 Hutchins, NW NW NW section 12, hit the Dundee and found it dry.

Pabst Petroleum Co., which was testing to the north of the West Branch field, found the Dundee dry in No. 1 Monfort, SE SE SE section 8, Grant Township, Iosco County, but will continue on to the Monroe in the hope of hitting pay.

19 Drilling Permits

Thirteen townships in five Michigan counties share the current week's list of 19 conservation department permits for drilling for oil and gas, with only two real wildcat locations on the roster. These two are E. Harvey Linabury's location on the Smith lease in AuGres Township of Arenac County, 3 miles west of Omer, and M. F. Whitehill No. 1 S. F. Spencer in section 14, Beaverton Township, Gladwin County.

The list includes two locations in Allegan County, four in Arenac, seven in Gladwin, four in Isabella and two in Montcalm.

Michigan Oil Exhibition

SAGINAW, Mich.—With oil tests dotting practically every corner of the state and at least seven newly discovered areas opened up to the driller in the past seven months, Michigan today is experiencing its greatest oil boom year since the Midland and Isabella counties oil strikes in 1927.

It is in celebration of this new boom, and to let Michigan folk know that oil has pushed into position as the state's third greatest industry—trailing only automobile production and the wealth created by the state's popularity as a vacation land—oil and gas men of the state have united to sponsor the third annual exposition of the Oil and Gas Association of Michigan, to open August 10 at Mount Pleasant. The exposition will run for six days, with exhibits by producers, supply companies and every branch of the widespread oil industry. Island Park, in the borders of Mount Pleasant, is the site for the exposition.

Deadline for Exhibitors

The executive committee of the International Petroleum Exposition has set September 15 as the deadline for exhibitors at the last oil show to take up their option on their old space, according to General Manager W. B. Way. All space not reserved under the options by that time will be thrown open to new exhibit prospects and old exhibitors who will need increased space for the May 14 to 21, 1938, Exposition in Tulsa. A new plat is being drafted to show the additional outside exhibit space being created.

Plans are being made to name the chairmen of the various committees which work out programs, help secure and evaluate scientific exhibits, and help secure attendance.

By STAFF CORRESPONDENT

CLAY, CLINTON AND MARION RECORD 6 NEW COMPLETIONS

MATTOON, Ill., Aug. 2.—With over 100 operations under way in the Illinois Coal Basin, including locations, rigs and wells drilling, completions continue to come in sparsely, but in the past week three more wells were completed in Clay County, one in Marion and two in Clinton counties. A number of wells are reported in sand or limestone pays, but these have not been given production tests.

In Clay County, Wiser Oil Co. No. 1 D. Smith, SW SE NE section 28-3n-8e, produced 1,617 bbls. the first 24 hours, and 1,358 bbls. the second day, flowing open through 2½-inch tubing, and was completed. It has Cypress sand at 2,624-31 feet, and St. Genevieve lime at 2,897-2,997 feet, total depth. Seven and one-half inch casing was set at 2,918 feet and 2½-inch tubing was run to 2,972 feet.

In the same county, Pure Oil Co. completed No. 1 A. Travis, SE NE NW section 33-3n-8e, which had Cypress sand at 2,630-50 feet, and St. Genevieve lime at 2,900-87 feet, total depth. Seven-inch casing was set at 2,911 feet and 2½-inch tubing was run to 2,905 feet. The well flowed 1,536 bbls. the first day, and 1,500 bbls. the second day. Pure Oil Co. also completed No. 1 Moseley, SE SW NE section 33-3n-8e. It started at 166 bbls. a day from St. Genevieve lime at 2,893-3,003 feet. Previously it had swabbed and flowed 177 bbls. of oil in 13 hours through casing, but it is now producing through 2½-inch tubing.

In Marion County, Frank Frederick and others completed No. 1 Alton, C N half S half section 28-4n-1e. It was shot with 10 quarts in Benoist sand at 1.426-41 feet, and pumped 230 bbls. of oil the first 24 hours.

In Clinton County, Santa Fe Oil Co. completed No. 1 Kohrman, 640 feet from N and 665 feet from E lines of SE quarter section 5-1n-3w. It was shot in Bartelso sand at 974-81 feet, total depth 981 feet, and made 75 bbls. the first 24 hours on the pump.

In Clinton County, the Bartelso Oil & Gas Co. completed No. 1 Schorman, 710 feet from E and 660 feet from S lines of SW quarter section 5-1n-3w, in sand at 973-87 feet, which was shot with 10 quarts. It is a 75-bbl. pumper.

Another rush of new operations was reported in the past week. In Marion County, Adams Oil & Gas Co. started drilling No. 2-A Wassem, SE cor. NW section 28-4n-1e; made a location for No. 3-A Wassem, CEL SE NW section 28-4n-1e; made location for No. 1 Ingles, CWL SW NE section 28-4n-1e; was moving in materials for No. 8 Merryman, NE cor. NW NW section 28-4n-1e; made location for No. 9 Merryman, SE cor. SW section 21-4n-1e, and for No. 2 Howell, CWL NE NW section 28-4n-1e.

In the same county, Ray Brown and others were drilling at 125 feet in No. 1 Easton, Block 1, Patoka townsite, NW cor. SE SW section 28-4n-1e. H & H Drilling Co. was rigging up rotary for No. 1 I. C. Adams, in Block 8, NE cor. SE SW section 28-4n-1e; W. J. Carter was moving in material for No. 1 Belcher, Patoka town lot, near NW cor. SE section 28-4n-1e, and Hempen & Burgess were rigging up machine for No. 1 Rogers, Patoka town lot, NW cor. SE section 28-4n-1e. Frank Fredericks was moving in material for No. 1 Claude Adams, Patoka town lot, SW cor. SE SW section 28-4n-1e. These and other new operations listed hereinafter bring the total of rigs, locations and drilling wells above 100 in the Illinois Basin development.

Shelby County

Art Genther will deepen an old well, No. 1 Prosser, CSL SW NE section 25-10n-4e, Shelby County, now at a total depth of 1,630 feet. It was originally drilled about six years ago.

Clay County

Mammoth Producing & Refining Co. made a location for No. 1 Bemis, SE SW SE section 9-3n-8e, in Clay County. Pure Oil Co. No. 3 B. Travis, SW NW NE section 33-3n-8e, set 10¾-inch casing at 321 feet, and was drilling at 851 feet. Pure Oil Co. No. 4 E. Weiler, NE NW SE section 33-3n-8e, set 7-inch pipe at 2,908 feet. It swabbed water with a showing of oil and gas. It was shut in eight hours and filled 750 feet with fluid, 99 per cent of which was fresh water. The crew was swabbing. Pure Oil Co. was still working on No. 1 C. H. Billington, SE SE SE section 27-1n-7e, which is at a total depth of 3,273 feet. It was swabbing salty water at last report.

Pure Oil Co. made a location for No. 6 Weiler, C NW SW SE section 35-3n-8e, and had cellar and pits dug for No. 3 Oscar Poppe, NE NW SE section 28-3n-8e. Wiser Oil Co. was moving in material for No. 3 D. Smith, SE SW NE section 28-3n-8e, and had cellar and pits dug for No. 4 D. Smith, NE SE NE section 28-3n-8e. Duncan Oil Co. spudded in No. 1 Carroll, NE NE SE section 8-2n-8e. Pure Oil Co. No. 1 Oscar Poppe, NW NE SE section 28-3n-8e, was drilling at 829 feet. J. D. Davis No. 1 Volbert, NW SE SW section 12-2n-6e, set 10-inch casing at 300 feet. Pure Oil Co. No. 3 Weiler, NW NW SE section 33-3n-8e, had Cypress sand at 2,625-34 feet, with a showing of oil. The hole was at a total depth of 2,980 feet and the crew was running 5-inch casing. Pure Oil Co. No. 1 B. W. Moseley, NW NE NE section 4-2n-8e, flowed 166 bbls. of oil in 24 hours at a total depth of 3,197 feet. It was not a completion. The production is from St. Genevieve lime topped at 2,899 feet. Pure Oil Co. No. 2 Sarah Bechtel, SW SW NE section 33-3n-8e, was fishing for tools at 2,962 feet. Wicklund Development Co. No. 1 Sanford, SE SE NW section 29-3n-8e, was drilling at 2,400 feet.

Marion County

In Marion County, Adams Oil & Gas Co. No. 2 A. L. Davidson, SW cor. SE section 21-4n-1e, total depth 1,605 feet, was plugged back to 1,500 feet and will be shot at 1,435-42 feet. Same company's No. 1 Oscar Hill, CEL SW SE section 28-4n-1e, was at a total depth of 1,446 feet and coring. Brown and others No. 1 Bachman, NW NW SE section 22-4n-1e, was drilling at 1,550 feet. Adams Oil & Gas Co. No. 1 P. L. Mojonnier, SE cor. NW SW section 28-4n-1e, had Benoist sand at 1,438-48 feet, with good saturation, and set 5½-inch casing at 1,423 feet. Same company No. 1 Nottier, NW cor. NE NE SW section 28-4n-1e, was shot with 10 quarts at 1,428-32 feet, and the crew was cleaning out. No. 2 Nottier, CNL NE NE SW section 28-4n-1e, was being cleaned out after a shot of 10 quarts at 1,440-44 feet. Bryan & Cassidy were drilling in sand at 1,616-25 feet, total depth, in No. 1 Jolliff, CSL NE NW SE section 28-4n-1e. Frank Frederick and others No. 1 Hill, NE cor. SE SW section 28-4n-1e, was drilling at 476 feet. Hausman and others were drilling at 500 feet in No. 1 Mojonnier on Outlot 5, Patoka, SE cor. NW NE section 28-4n-1e. Kirk D Holland No. 1 Wassem, SE cor. NW SE SW section 28-4n-1e, was drilling at 1,035 feet. Illinois National Oil Co. was drilling at 502 feet in No. 1 Belcher, town lot, NE cor. SW NE SW section 28-4n-1e. Vermillion Oil Co. No. 1 Methodist Episcopal Church, NE SW SW section 28-4n-1e, was drilling at 850 feet. Eddington and others No. 1 Nichols CEL SW SE section 12-4n-1e, was underreaming 6-inch casing to 2,429 feet.

Perry County

H. H. Forrester No. 1 fee, C W half SW NW section 5-6s-1w, Perry County, was drilling at 5,060 feet.

Wayne County

J. D. Davis No. 1 Nuger & Rose, SE cor. NE SE SW section 21-2n-5e, Wayne County, was coring at 2,150 feet. Washburn Petroleum Co. No. 1 Acola, NW NE NW section 31-2s-6e, will underreaming 8-inch casing to 1,502 feet. Mammoth Producing & Refining Co. No. 1 D. S. Garrison, NW NW NE section 11-1s-7e, was at a total depth of 3,210 feet, rigging up standard tools. It cored a saturated sand at 3,102-10 feet. Pure Oil Co. No. 1 Mullinax, NE NE SE section 27-1n-7e, was coring at 2,997 feet.

Richland County

R. Neely and others had cellar and pits dug for No. 1 R. Baughman, C SE SE NE section 22-3n-10e, Richland County. Ohio Oil Co. was at a total depth of 2,963½ feet in No. 1 Arbuthnot, C NW NW NW section 8-3n-8e, after having picked up saturation at intervals from 2,860 feet to the bottom.

Clinton County

Adams Oil & Gas Co. No. 1 Brammier, C SW NE SW section 2-1n-2w, Clinton County, topped St. Genevieve lime at 1,470 feet and Roseclaire sand at 1,493-1,509½ feet; topped Oolitic lime at 1,509½ feet and was coring at 1,560 feet. Santa Fe Oil Co. made a location for No. 1 Maddox, NW cor. SW SW SW section 4-1n-3w.

OHIO

TOLEDO, Ohio, Aug. 2.—Ohio completions were unusually few during the past week. The number of completions in northern Ohio was especially small. One well of interest, although it was not large, was the East Ohio Gas Co. No. 1 John Baley in the third quarter of Sandy Township, Tuscarawas County. The Clinton sand was encountered at 4,781-98 feet. The well made 184,000 feet naturally and was shot. It was shut in at 238,000 feet with a rock pressure of 1,240 pounds.

In Knox County Steri Brown No. 2 Murray Homestead, section 14, Clay Township, was a 4-bbl. oil well in the Berea sand at 725-31 feet. H. E. Perkins No. 1 Lester Crouthers, section 4, Union Township, was abandoned in the Clinton with only a small show of oil at 2,817-48 feet. The second sand occurred at 2,855-62 feet.

In Licking County, Hope Construction & Refining Co. No. 2 Delphia Smith, in section 17, Perry Township, made 2 bbls. of oil in the Berea sand at 669-78 feet. In section 1, Newton Township, of the same county, R. H. Bright No. 2 Ed Dixon was abandoned below the Berea horizon at a total depth of 680 feet. No Berea sand was encountered.

In Huron County the only completion of the week was Leathers and others No. 1 Harry Fewson, section 4, Townsend Township, which was drilled to a depth of 825 feet. The well was shut in with an open flow of only 542 feet.

In Putnam County Brown and others No. 1 Federal Land Bank, section 22, Blanchard Township, was completed in the Trenton at 1,333-57 feet. The well made 80 bbls. of oil the first 24 hours after a shot, and gauged 60,000 feet of gas. In section 23 of the same township and county, Brown and others No. 1 W. B. Geirhart was drilled to a total depth of 1,536 feet, and plugged back to 1,416 feet. Here it was shot and made 60 bbls. of oil the first 24 hours. It gauged 40,000 feet of gas.

In Henry County M. L. Stevens No. 1 Willis Jackson, section 36, Harrison Township ,was completed in the Trenton at a total depth of 1,375 feet. The well was treated with acid and made 30 bbls. the first 24 hours.

In Belmont County the Barnesville Development Co. No. 1 Lindley P. Bailey, section 3, Warren Township, was tubed as a commercial gas well in the Injun sand at 1,195-1,200 feet. The well gauged 192,000 feet of gas.

In Guernsey County George Jewell and others No. 4 Henry Armstrong, section 6, Jefferson Township, was a commercial gas well in the Berea, encountered

(Continued on Page 84)

North Louisiana, Arkansas

By MITCHELL TUCKER

PROMISING SHOW OF OIL IN SUN WILDCAT CAUSES STIR

SHREVEPORT, La., Aug. 2.—Excitement is running high in southern Mississippi now after the Sun Oil Co. and others cored 7 feet of apparently saturated oil sand in their No. 3 Talley wildcat test, section 33-4n-15w, on the flank of their recently discovered salt dome in Lamar County. No. 3 Talley is the fourth test of the immediate area, the three other previous wells penetrating the salt at much higher levels. This well topped the Upper Cretaceous beds at 4,800 feet, and went into a porous sand at 5,643 feet. A 7-foot core was recovered from 5,643 to 5,650 feet. A service truck was ordered out of El Dorado, Ark., and drill stem test made of this zone, which showed 30 feet of drilling mud and 8 inches of light asphalt, with no evidence of salt water. Reaming and coring are being continued deeper in this same formation, which as yet has not been definitely identified.

Important extensions and wildcat wells near the completion stage in all portions of the Ark-La-Tex area were the center of interest over the last seven days. New completions were made in the recently completed Schuler field of Union County, Arkansas, and the Ramsey field of DeSoto Parish, Louisiana.

RODESSA—ARKANSAS

The next week should see several of the 10 drilling wells in the Arkansas extension area of Rodessa at the coring or testing stage. Completion of this group of wells as producers is expected greatly to stimulate the rate of development throughout the 6 to 8 square miles indicated productive by the recent extension well into Miller County, Arkansas. McClanahan and others No. 1 Capps, discovery well in section 14-20-28, continues to produce at the rate of about 425 bbls. daily.

The Arkansas Board of Conservation will publish its rules governing spacing and development practices here next week, following two public hearings in the field.

RODESSA—LOUISIANA

The Blackwell Oil & Gas Co.'s Pettit lime test in the northeast portion of the Rodessa field is waiting for a swabbing machine to be moved in for complete testing. Casing has been cemented at 6,640 feet, and showings of oil in the Pettit lime (about 600 feet below present producing level at Rodessa) were logged from 6,653-90 feet.

R. W. Norton No. 1 Payne, SE SE section 27-23-16, which drilled to a total depth of 11,486 feet on the southern peak of the Rodessa gas belt, has plugged back to 10,600 feet for the testing of several attractive zones indicated on Schlumberger. A total of 1,170 feet of 4½-inch liner has been run in the hole on tubing, and preparations were being made to wash and test as the week closed.

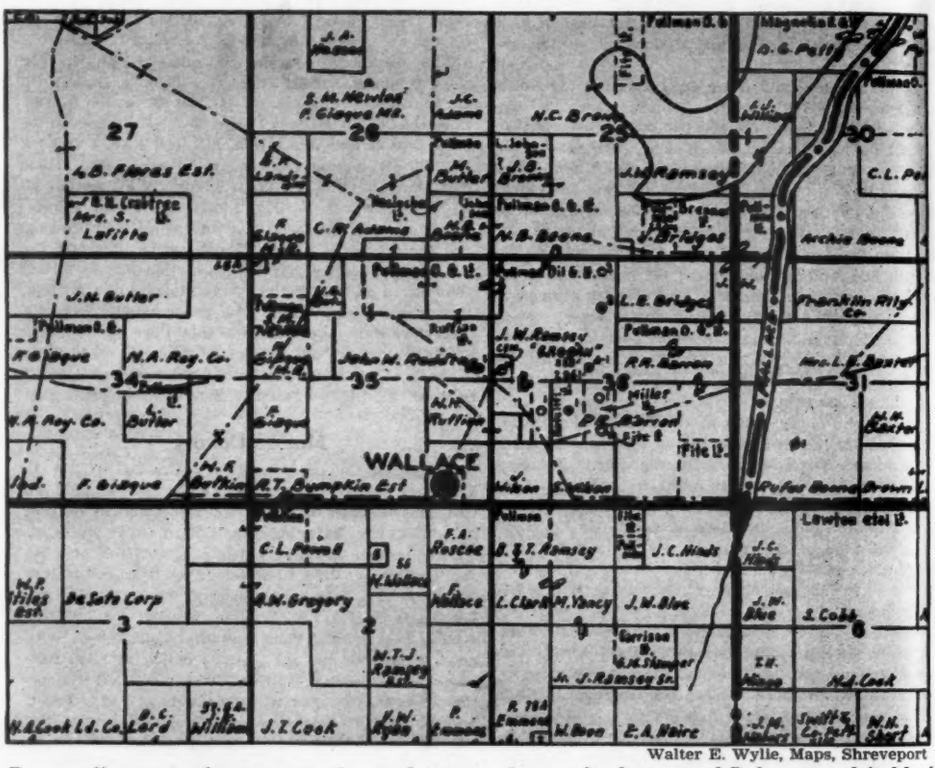
In the Mitchell-Gloyd sand producing area, commonly referred to as North Rodessa, three completions were made during the week. R. W. Norton No. 11 Starke, NE section 17-23-16, flowed 488 bbls. in 24 hours through one-half inch tubing choke, total depth 5,960 feet. Standard Oil Co. of Louisiana No. 1-B Emma J. Parker, SE NE section 9-23-16, flowed 49 bbls. hourly through one-half inch tubing choke, gas-oil ratio 690 to 1, total depth 5,970 feet. Same company's No. 2 O. A. Zylks, NE SE section 9-23-16, flowed 37 bbls. per hour initially through one-half inch tubing choke, gas-oil ratio 1,324 to 1, total depth 5,950 feet.

RODESSA—TEXAS

Cass County

Three completions were made in the Mitchell-Gloyd sand producing area on the Texas side of the field. The W. G. Ray Drilling Co. No. 2-A Parker, G. Crowder Survey, flowing 15 bbls. hourly through one-quarter inch tubing choke, total depth 6,045 feet. The Bay Oil Corp. No. 1 W. R. Cobb, G. Crowder Survey, flowed 8 bbls. hourly through one-quarter inch tubing choke, total depth 6,105 feet. The Bay Oil Corp. No. 1 W. B. Parker, G. Crowder Survey, flowed 130 bbls. per day, total depth 6,065 feet.

In the southwestern portion of Cass County development two completions were made. The Magnolia Petroleum Co. No. 3 W. M. Hall, Wilson Robinson Survey, flowed 269 bbls. per day through one-half inch tubing choke, total depth 6,076 feet. R. W. Norton No. 1 W. and E. Starke, Dudley Gilliam Survey, flowed 17 bbls. hourly through three-eighths inch tubing choke, total depth 6,000 feet.



Walter E. Wylie, Maps, Shreveport

Four wells are in the process of completion in the newly discovered Paluxy sand field of DeSoto Parish. Pullman Oil Co. No. 1-A Ramsey, section 36-11-11, is being well sustained at about 200 bbls. daily

Marion County

As an extension test 1¼ miles southwest of the Jefferson producing area of Marion County, Texas, and 13½ miles southwest of production in the Rodessa field proper, a group of Marshall, Tex., operators have acquired a 70-acre tract in the R. Bennington Survey and have let contract for immediate drilling.

The Arkansas-Louisiana Gas Co.'s shallow Blossom sand test east of Jefferson, Tex., known as No. 1 R. H. Woods, J. C. Eaton Survey, has been plugged and abandoned at 2,628 feet after topping the Blossom sand at 2,505 feet and finding it to carry salt water only.

NORTH LOUISIANA

Bienville Parish

The Hunt Oil Co. and Seaboard Oil Co. of Texas No. 1 Bodcaw Lumber Co., wildcat test of their extensive holdings in SE section 30-14-5w, topped the Travis Peak formation at 7,762 feet, and after making a dry drill stem test in this objective from 7,279 to 7,784 feet, has been abandoned, total depth 7,784 feet. Several small gas showings were reported.

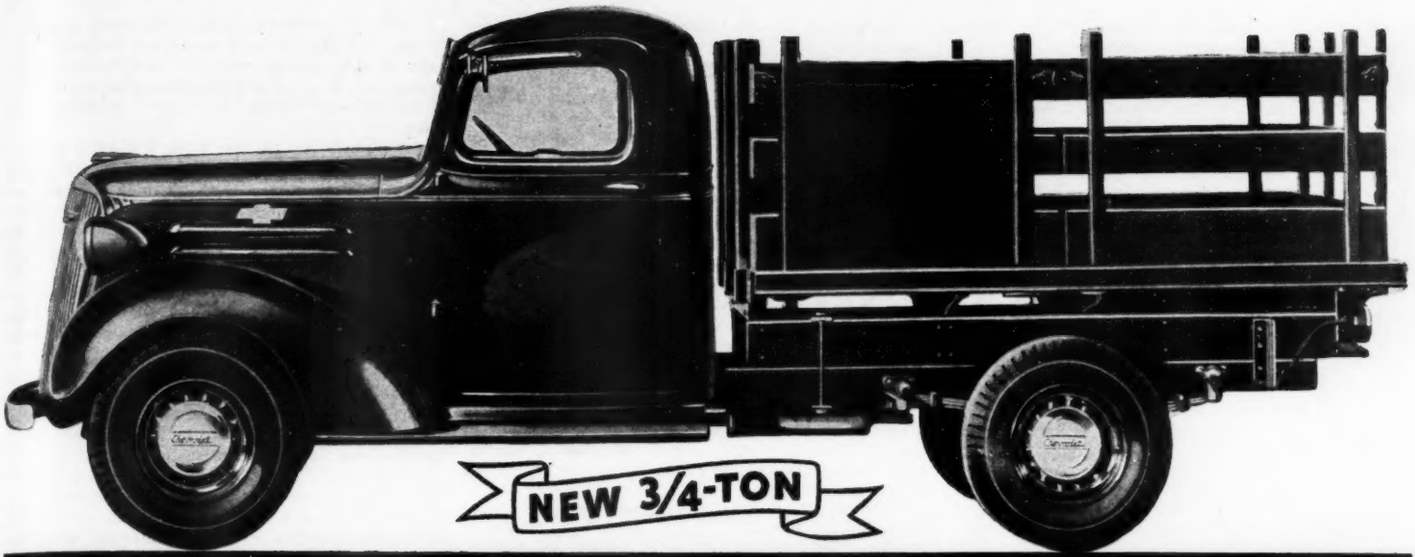
Caddo Parish

In the Keithville area, about 15 miles south of Shreveport, W. J. Hunter and others are completing a small gas producer in their No. 1 Stoer, section 10-15-15. It may be recorded as a new field opener. Production is from a 20-foot lime member just below the anhydrite, as all zones in the Pettit lime proved nonproductive. After drilling to a total depth of 6,560 feet in this zone, and testing all possible levels, plug has now been set at 5,413 feet. Perforations from 5,035 to 5,045 feet yielded only salt water. Casing was perforated from 5,100 to 5,120 feet and acidized, showing 4,000 feet of salt water and some gas on drill stem test. After closing in, the pressure built up to 500 pounds, and when opened up made a small amount of gas. Tubing was pulled and packer set at 5,095 feet in an effort to shut off the gas, and on retest the well made about 500,000 feet of gas. This lime zone will be reacidized with 3,000 gallons and tested.

DeSoto Parish—Ramsey Field

The four offsetting wells, which were immediately staked following the recent opening of the Ramsey field by Grogan Oil Co. No. 1-A Ramsey, section 36-11-11, are in the process of completion.

Pullman Oil Co. No. 3 Ramsey, same section, topped the Paluxy pay 10 feet higher than the discovery well,



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and recovered a 9-foot core heavily saturated. Casing has been set preparatory to completing.

The discovery well here made official production test last week, gauging 169 bbls. of net oil and 41 bbls. of salt water during 17 hours through 2-inch tubing.

Claiborne Parish—Lisbon Field

Based on 60 producers, the August allowable for the Lisbon field has been placed at 12,000 bbls., which is allocated on a 75 per cent acreage and 25 per cent bottom-hole pressure basis. Three producers were completed last week, bringing the total to 58.

Production and number of wells, by companies, for the last week is as follows:

	No. wells	Dly. avg. prod.
Atlantic Refining Co.	2	431
J. B. Bond	2	372
DeArman & McMillan	8	1,601
Gulf Refining Co.	8	1,624
Harry Hanbury	2	433
Hollifield & McFarlane	2	420
Love Brothers	2	432
Lyons & Neely	10	2,056
Magnolia Petroleum Co.	5	1,077
Oden & Evans	2	396
Ray P. Oden	2	396
Red Iron Drilling Co.	2	426
C. R. Schuster	2	400
Scout Oil Co.	4	805
Red Iron Drlg. Co. and Scout Oil	2	397

Rig has been moved back in to T. L. James & Co. No. 1 Baker, section 25-21-5, three-quarters of a mile north of Lisbon production, which was temporarily abandoned several weeks ago without thorough test-

L. S. Ostrander, superintendent, South Central Drilling Co., and his son, snapped in the three-state Rodessa field

ing. Casing will be set and the 4-foot saturated lime zone acidized and given production test.

The first pumping unit to be installed at Lisbon was set at J. B. Bond No. 2 Patton, NW NW section 36-21-5, but will be used only to agitate the high fluid level for the present.

The four Lisbon completions for the week yielded an aggregate initial production of 3,640 bbls. Gulf Refining Co. No. 2 Henry, N half NW NE section 31-21-4, gauged 60 bbls. hourly on initial test through one-half inch tubing choke after a 4,000-gallon acid charge, total depth 5,183 feet. Harry Hanbury No. 1-A McDonald, E half NW NW section 31-21-4, flowed 740 bbls. on 15-hour production test through one-half inch tubing choke after 5,000-gallon acid treatment, total depth 5,277 feet. Lyons & Neely No. 1 Bean, W half SE NE section 31-21-4, flowed 40 bbls. hourly through 20/64-inch tubing choke, 4,000 gallons of acid, total depth 5,280 feet. C. R. Schuster and others No. 2 M. S. Patton, S half NW NE section 1-20-5, offsetting the discovery well, flowed at the rate of 10 bbls. hourly through 23/64-inch tubing choke, 4,000 gallons of acid, total depth 5,329 feet.

Claiborne Parish—Sugar Creek

United Gas Public Service Co. and others are drilling below 4,250 feet in their No. 2 Brownfield, section 5-19-5, a proposed 9,000-foot Lower Marine test prompted by important showings logged in their No. 2 Darrett in section 31-20-5, abandoned several months ago at 8,616 feet owing to mechanical difficulties.

Grant Parish

R. W. Fair No. 1 R. L. Gray has been drilled to a total depth of 4,026 feet without encountering attractive showings into the Wilcox formation, and has been abandoned.

LaSalle Parish

On a flank location in the Urania field, the Arkansas Fuel Oil Co. No. 9-E Urania, NE SW NE section 18-10-2e, found the productive level dry and has been abandoned, total depth 1,526 feet.

Monroe Gas Area

Three completions were recorded in the Monroe gas field last week. The Interstate Gas Co. No. 71 fee, section 7-21-4, Union Parish, gauged 6,000,000 feet, 635 pounds rock pressure, total depth 2,143 feet. The United Gas Public Service Co. No. 50 Crossett, section 57-21-5e, gauged 12,000,000 feet, total depth 2,250 feet. No. 54 gauged 1,000,000 feet, 905 pounds rock pressure, total depth 2,258 feet.

Red River Parish

J. D. Wadley No. 1 McClelland, SE NE section 24-13-11, wildcat test, was found dry at a total depth of 2,550 feet and abandoned.

Sabine Parish

Acadia Refining Co. No. 2 Henderson, SE section 30-9-13, on the flank of the Converse field, pumped 62 bbls. daily, total depth 1,775 feet.

Webster Parish

Following two public hearings on the Cotton Valley field the Louisiana Department of Conservation has issued its order No. 10 fixing spacing of the Lower Marine 8,100-foot wells at one well to each 80 acres, by placing the field allowable at 75 per cent acreage and 25 per cent bottom-hole pressure. The new order replaces the former 40-acre spacing rule under which all development to date has followed. A spacing of 160 acres per well was asked by a majority of operators, but compromise was made on an 80-acre maximum. The total daily field gas allowable was set at 35,000,000 feet. The wells must have a market for their gas, however, and they will not be allowed to waste the gas in order to obtain the distillate.

Daily Gross Production

Estimated daily gross production all companies week ending July 30:

NORTH LOUISIANA

	Bbls.
Bellevue	745
Caddo light	3,890
Caddo heavy	2,600
Converse	800
Cotton Valley heavy	150
Cotton Valley light	*5,290
DeSoto and Red River	1,675
Elm Grove	370
Haynesville	3,080
Holly	135
Homer	2,515
Lisbon	14,285
Pleasant Hill	120
Rodessa	51,240
Sarepta-Carterville	330
Sligo	445
Sugar Creek	510
Urania	2,870
Zwolle	795
Total	91,845

SOUTH ARKANSAS

Champagnolle	1,410
El Dorado	2,040
Lisbon	280
Miller County	485
Nevada	740
Schuler	1,520
Smackover light	2,150
Smackover heavy	17,250
Stephens	575
Troy	600
Urbana	1,200
Total	28,250

Texas side of Rodessa field 38,640 bbls. daily.
Arkansas side of Rodessa field 435 bbls. daily (not included in Louisiana side).

*4,840 bbls. in distillate.

ARKANSAS

Howard County

The Beetcher Oil & Gas Co. No. 1 Arkansas Portland Cement Co., wildcat test in section 28-11-27, has been abandoned as dry at a total depth of 2,936 feet.

Union County—Schuler

Hopes that the Schuler field will grow to major importance were revived last week after more than two weeks of disappointing developments, during which time dry holes were completed to the north and west of production.

Two new completions were being made as the week closed, bringing the total number of producers to six, and the daily average production to 4,300 bbls. Production from the original four completions is being well sustained after the normal decline from flush proportions.

The Marine Oil Co. No. 1 fee, NW SW SW section 17-18-17, about three-eighths of a mile east of production, flowed at various rates up to 75 bbls. per hour during testing operations, with about 3,000,000 feet of gas. As the week closed this well was flowing 60 bbls. hourly through one-half inch tubing choke. Production is through perforated tubing at 5,614 feet.

The Lion Oil Refining Co. is bringing in its No. 2-B Morgan, NE NW SE section 18-18-17, which on initial tests is flowing 70 bbls. hourly through one-quarter inch tubing choke, tubing pressure 840 pounds, casing pressure 1,180 pounds. Casing was perforated in this well at 5,811 feet, or about 240 feet lower than that of the discovery well a quarter of a mile west, indicating the extreme irregularity and lenticularity of the sands of the Lower Marine at Schuler.

Two other wells have cored saturation and set casing preparatory to testing, both of which are south and east of production. The remaining 12 wells are coring for saturation in the lenticular pay sands, and should soon give a much more accurate evaluation of Schuler's potentialities.

St. Francis County

Manning & Martin, Inc. No. 1 R. C. Gregg, section 20-5n-5e, has reported a showing of oil from 3,472 to 3,499 feet, although drill stem tests indicated salt water only. Additional testing will be made.

EAST TEXAS (Border Counties)

Panola County

The Magnolia Petroleum Co. No. 2 E. A. Hull, Thomas Applewhite Survey, proposed 9,000-foot test to the Lower Marine beds of the Trinity, offsetting its recent gas-distillate discovery in the Lower Glen Rose, is being watched closely as it drills below 7,250 feet.

The Danciger Oil & Refining Co. No. 1 Tatum, A. Bissell Survey, encountered strong gas showings in the Paluxy sand level at 3,165 feet. Mud was reconditioned with weight material and drilling continues below this depth.

Shelby County

Siler & Riley No. 1 Rushing, M. Smith Survey, which has been shut down for several months, has resumed drilling around 3,000 feet.

MISSISSIPPI

Bolivar County

The Phillips Petroleum Co. No. 1 Perthshire, section 2-24n-7w, deep test on their geophysically mapped block, is drilling in Tuscaloosa gravel at 4,810 feet.

Hinds County

The state of Mississippi has begun the drilling of its Nos. 6 and 7 fee in the Jackson gas field as further development of its properties.

Southwest Texas Fields

(Continued from Page 61)

new producers, and the new southwest extension in the new sand is being placed on the pump to add to the proven acreage of the rapidly developing area. The test, Navarro Oil Co. No. 1 Rossi, 1 mile southwest of present production, and a potential producer in the Pettus sand at 5,330-42 feet last week flowed 8 bbls. per hour before production declined and the well went dead.

Duval County has a tight wildcat test in the Baltimore Drilling Co. No. 1 Afflerbach. Located in the northwest part of the county, the test is reported to have cored a sand showing odor of oil. Depths are unknown.

The Colmena field in the same county seemed due for an extension as the Conservative Oil Co. No. 1 Duval ranch showed recovery of 500 feet of pipe line oil at 1,483-87 feet. Casing was set at 1,483 feet and the well is jetting oil. The No. 1 D.C.R.C. is one-half mile west of production in the field.

The Lower Rio Grande Valley is quiet, with no developments excepting a probable extension to Starr County's Roma field. There, the Texas Co. No. 6-A Guerra, 2,000 feet east of production, has cored the field sand higher than any other test thus far, and is making production tests.

DEEP PRODUCTION MAY BE FOUND IN BAMMEL DISTRICT

By
F. L. SINGLETON

HOUSTON, Tex., Aug. 2.—The prospects of deep production being found in the Bammel area, Harris County, an 1,800-foot northeast extension to the Silsbee field in Hardin County and the scheduled testing of several outpost wells in proven fields were the highlights of a comparatively quiet week along the Gulf Coast district.

In the Bammel area, north of Houston in Harris County, Superior Oil Co. No. 1 D. F. Buetler in the David Ehrhardt Survey was being watched with interest as it prepares to core deeper in a sand section showing gas bottomed at 9,898 feet. A Schlumberger survey was run to the total depth and a protection string of 7-inch casing was cemented on bottom. The approximate top of the sand section is 9,750 feet and it is reported to be broken sand and sandy shale carrying gas with no showing of oil. The well is situated several hundred feet northeast of Hamil & Smith No. 1 Zappa in the J. Farwell Survey which was completed for a distillate producer in the Cockfield sand at 6,412-28 feet. For the time being detailed information on the well is being withheld and the sand section has not been identified, although it is known to have passed through the Cook Mountain section and is probably in the Wilcox of the Mt. Selman series. This is the deepest test drilled in this particular sector and regardless of the outcome, valuable geological data have been obtained.

The potentialities of the Silsbee field, Hardin County, were enlarged by completion of Republic Production Co. and Houston Oil Co. No. 18 Brooks, which extended production approximately 1,800 feet northeast. Bottomed in the lower sand at 6,915 feet, the well flowed 350 bbls. per day through a quarter-inch choke with tubing pressure 850 pounds and casing pressure 600 pounds.

New Horizon for Old Ocean

A new deep producing horizon for the Old Ocean field was developed by the completion of Harrison & Abercrombie No. 4 Bernard, about 1,738 feet south of production. Drilled to a total depth of 10,775 feet, perforations were made in the 5-inch liner at 10,396-10,401 feet and the well is flowing 11 bbls. of fluid per hour through various chokes. It is still cleaning itself of wash water and mud and a 24-hour gauge will not be available until several days. Production is from a thick broken section, and its producing depth surpasses the same operator's No. 3 Bernard which is flowing at 10,263-93 feet.

To the northeast at the Sandy Point field, the Stanolind Oil & Gas Co. was preparing to test No. 1 Fite, several hundred feet southwest of the field's two producers in the D. Talley Survey. Gas sand was cored at 6,467-76 feet and sand showing oil at 6,496-98 feet. Bottom of the hole is 6,500 feet and 5¾-inch casing has been cemented at 6,494 feet. Completion of the well will be interesting, as it will determine the probable trend of the field. Only one dry hole has been drilled and it is located 1½ miles to the southeast in the Chester S. Gorbet Survey.

Prospect of the Heyser field proper in Calhoun County being linked with production to the north in Victoria County has been discouraged by Humble Oil & Refining Co. No. 1 P. H. Marshall, one location north of the field proper. As an exploratory test it was drilled in search of the 5,700-foot sand recently opened to the north across the line in Victoria County. The test was drilled to a depth of 6,200 feet and failing to find the deep sand, it has been completed for a gasser in the discovery horizon at 5,473-84 feet. Offsetting the Humble well to the east, Normandie Oil Co. No. 1 J. G. Cook perforated casing at 5,476-85 feet and is flowing gas and distillate. The north extension area has been quite active during the past two weeks, as new development has been started by Sinclair Prairie Oil Co. on the W. H. Bennett lease, Magnolia Petroleum Co. No. 1 Lander and the Sun Oil Co. No. 1 Coffey, all being offsets to George Echols production in the J. Galban Survey.

Two miles southwest of the Seabreeze field, Chambers County, Sun Oil Co. No. 1 Felix Jackson swabbed 100 per cent salt water from a depth of 8,570 feet and screen and liner are being pulled. The well was reported to have been bottomed in a sand section showing oil and gas, and it is possible that the hole will be plugged back and another test made.

Discovery Well Recompleted

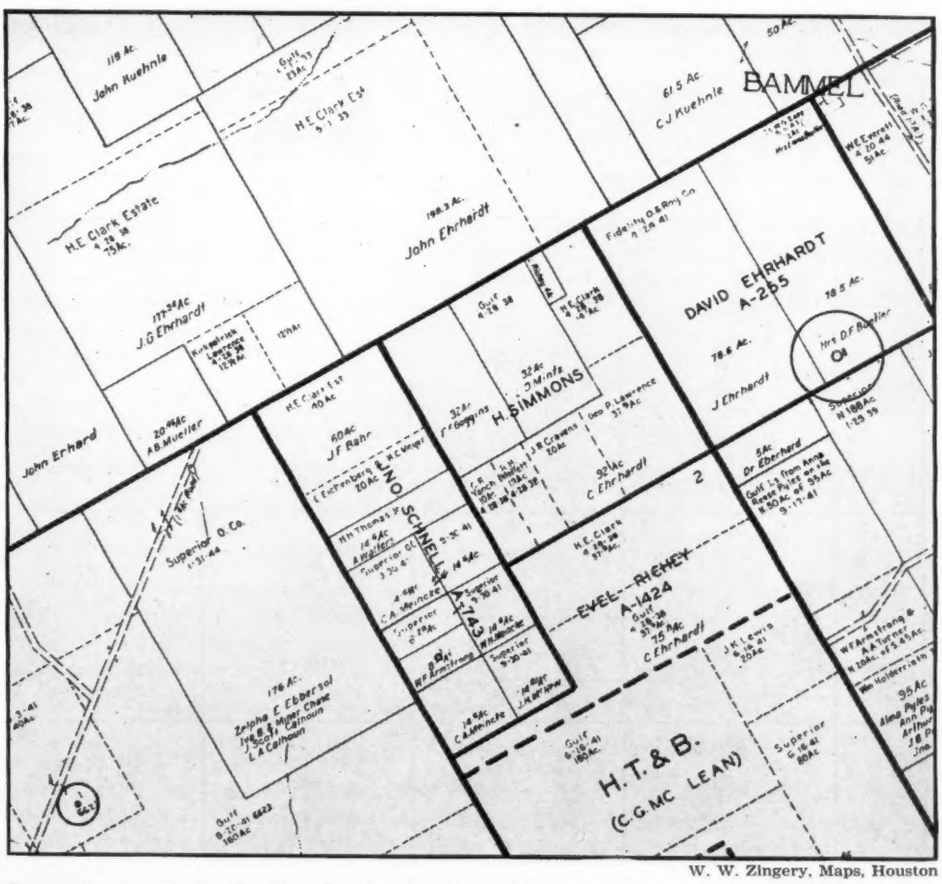
In the Clinton field (Green Bayou) Harris County, Stanolind Oil & Gas Co. No. 1 Candelari, the discovery well, has been recompleted for a dry gas well in a sidetracked hole bottomed at 8,140 feet. The sand section was topped at 8,093 feet and through a 5/32-inch choke the tubing pressure and casing pressure registered 2,850 pounds. No. 1 A. S. Moody in the Reels & Trobough Survey is being rigged up by the same company. In the Fairbanks field, Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 1 Wright, 932 feet east of production in the Francis Fry Survey topped broken sand at 6,812½ feet and the hole is bottomed at 6,834 feet with 7-inch casing at 6,833 feet. The first important outpost test to be made in this field has been announced by Stanolind Oil & Gas Co. No. 1 Mills in the A. Larson Survey, approximately 3 miles northeast of production. In the recently opened Friendswood field, in the southern part of the county, Humble Oil & Refining Co. has made location for No. 1 Louise R. Beamer, 933 feet northeast of its discovery well in the Thomas Choate Survey. South of the discovery well, Glenn H. McCarthy No. 1 Whitcomb is drilling below 3,600 feet.

Fannett Field

In the Fannett field, Jefferson County, Gulf Oil Corp. No. 8 Junker, which was being drilled in search of the deep Frio sand recently developed by the same company's No. 7 Junker is shut down after encountering rock salt at 6,578 feet. It is 630 feet west and 110 feet south of No. 7 Junker which is producing from sand bottomed at 6,612 feet. Location is in the William Smith Survey. In the Labelle field, Jefferson County, Sun Oil Co. No. 1 John Ward, which attempted to blow out last week after encountering a gas sand at 10,043 feet, is still shut down at total depth of 10,046 feet, while the operators try to bleed off some of the gas pressure.

Jack Frazier and others No. 1 John Roberts southwest of the discovery well of the Hardin field, Liberty County, perforated casing with 50 holes at 7,581-7,567 feet and on a 20-hour gauge through a 12/64-inch bottom-hole choke it flowed 49 bbls. of clear distillate. In the southwest extension area and offsetting Jack

(Continued on Page 89)



W. W. Zingery, Maps, Houston

Bammel area, Harris County, showing location of Superior Oil Co. No. 1 Buetler, indicated by large circle. The discovery well is indicated by small circle

West and North Texas

By
L. E. BREDBERG

GAINES COUNTY CONTINUES TO BE CENTER OF INTEREST

FORT WORTH, Tex., Aug. 2.—Gaines County continues to remain the center of interest in the Permian Basin as wildcats and outpost tests log oil showings which presage the opening of at least one more field and the extension of a recently discovered field to the northeast.

This week Amon G. Carter and Continental Oil Co. No. 1 Moore-Langdon, in section 44, Block AX, P.S.L. Survey, near the Gaines-Yoakum County line, started showing for a producer and consequently a 2½-mile northeast extension to the recently discovered Wasson field in which there are six tests now drilling. At total depth of 4,943 feet it swabbed at the rate of 10 bbls. per hour through casing on a 11-hour test, 7-inch having been previously set at 4,902 feet. It was drilled to 4,999 feet after logging the saturated lime at 4,943 feet and tubing has been run preparatory to testing through a smaller string than the casing.

The discovery well, in section 48, Block AX, was recently completed for a 330-bbl. well at total depth of 4,959 feet, and with this outpost test showing for a producer, two tests drilling between the discovery and outpost well are practically sure of making producers also, making four wells for the new field within a short space of time. The other two tests are in the SW cor. of section 46 and NW cor. of section 47, the former being drilled by Continental Oil Co. and the latter by Carter, who obtained a farm-out of acreage under the Continental block on which they drilled the discovery and is drilling the other test.

The next important test in this area is that of Amerada Petroleum Corp. on the Florence Matthews lands, in the NE cor. of section 417, 1 mile to the southwest of the Wasson discovery. It is down 4,800 feet and should log the lime pay within another couple of hundred feet. If it proves a producer, a field 4 miles in length will be proved from southwest to northeast, Carter and Continental holding nearly all of the intervening acreage between the extension wells, with the exception of Humble Oil & Refining Co. and Phillips Petroleum Co. The latter company is drilling a west offset to the discovery.

Gaines Discovery

Nine miles southwest of the above mentioned Wasson pool, Continental Oil Co. No. 1 Dr. E. H. Jones, in section 22, Block A-7, P.S.L. Survey, which has been showing for a producer and discovery in the northwestern part of Gaines County, near the New Mexico state line, is now swabbing through tubing with the hole bottomed at 5,040 feet. It previously swabbed 53 bbls. of oil in nine hours when bottomed at 4,949 feet after it was acidized with 1,000 gallons. The company also holds a large block around this well, Gaines County appearing as Continental's "lucky" area since the opening of two fields in the county within a short time.

Cochran Well

The Duggan pool in the southeastern corner of Cochran County, opened several months ago by Cascade Oil Corp. and others on the Duggan ranch, in League 55, Oldham County school lands, now has its second well in, about three-eighths of a mile northwest of the discovery. M. S. Ingleright and others drilled it on the Bob Houston lands in the NE cor. of Labour 14, same league and survey. It topped the pay at 5,000 feet, logged an increase at 5,020-30 feet and another at 5,040-53 feet, drilling to 5,060 feet to shut down and acidize before completing. The discovery was completed at a plugged-back depth of 5,072 feet, flowing about 400 bbls. per day after shooting. It logged the first pay at 5,024 feet and was drilled to a total depth of 5,095 feet, plugging back to shut off water.

Lack of pipe line outlet has been responsible for holding down development of this, the northernmost producing area of the Permian Basin, but with the development of the new Wasson field in northern Gaines and the development of the Bennett field in southeastern Yoakum County, a major pipe line company is expected to extend its lines from northern Andrews up into these two areas, possibly to this northernmost pool, which would further the development of all three of the areas.

Three Widespread Wildcats

Three new wildcats in widespread areas in West Texas, one in Nolan County, one in Lynn County and one in Loving County. The latter test is now rigging up on the E. C. Marrs lands in section 20, Block 54, Township 2, T.&P. Survey, about midway between the old Wheat field and the new Mason field in Loving County. It will be a Delaware sand test and is to be drilled by Continental Oil Co.

In Lynn County, D. Nowlin of Tahoka and others are preparing to drill a 5,500-foot test on a block of 5,000 acres in the northwestern quarter of the county, several major companies pledging dry hole money and buying protection acreage around the location which is in the SW quarter of section 151, Block 12, E.L.R.R. Survey. Another block in the county, which will probably be drilled in the near future, is that of O. C. Collins and others of Fort Worth. It centers in section 423, Block 9, H.E.&W.T. Survey.

M. S. Ingleright and L. E. Hults, both of Fort Worth, have assembled a block of 5,000 acres in the southern part of Nolan County, around the town of Decker and plan drilling a 4,000-foot test, to be spudded by September 1. The block is in Block 1-A, H.&T.C. Survey, and is about 17 miles south of Sweetwater.

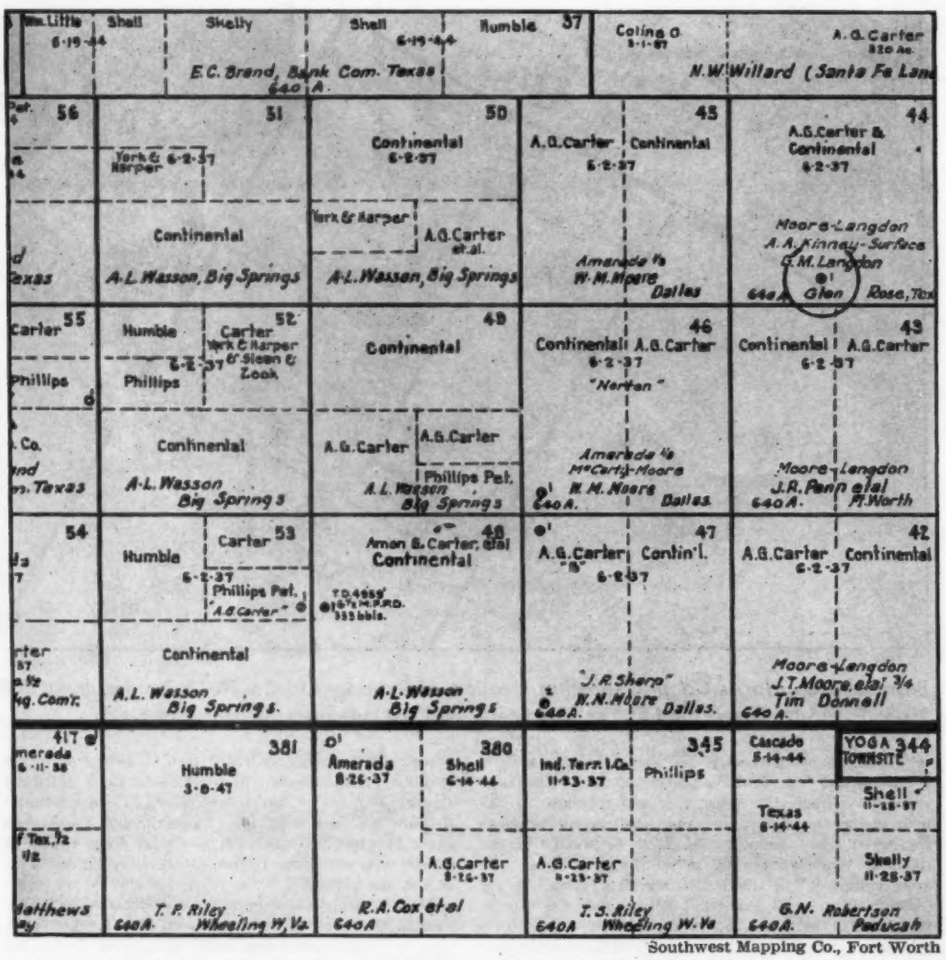
Low Ordovician

Superior Oil Co. No. 1 Todd, in section 55, Block UV, G.C.&S.F. Survey, north central Crockett County, which is drilling for production in the Ordovician, in which a previous test in the same area drilled by Stanolind Oil & Gas Co., had a good showing of oil, is running about 300 feet lower than previous test on top of the Ellenberger, pay member of the Ordovician. This second test topped this deep lime at 7,424 feet, or minus 4,887 feet. It is coring below 7,475 feet. The former deep test on the structure was abandoned four years ago at a total depth of 8,042 feet where it struck a hole full of sulfur water.

Logging this important marker so much lower than the previous test does not lend encouragement to its owners, as abanonment now appears certain.

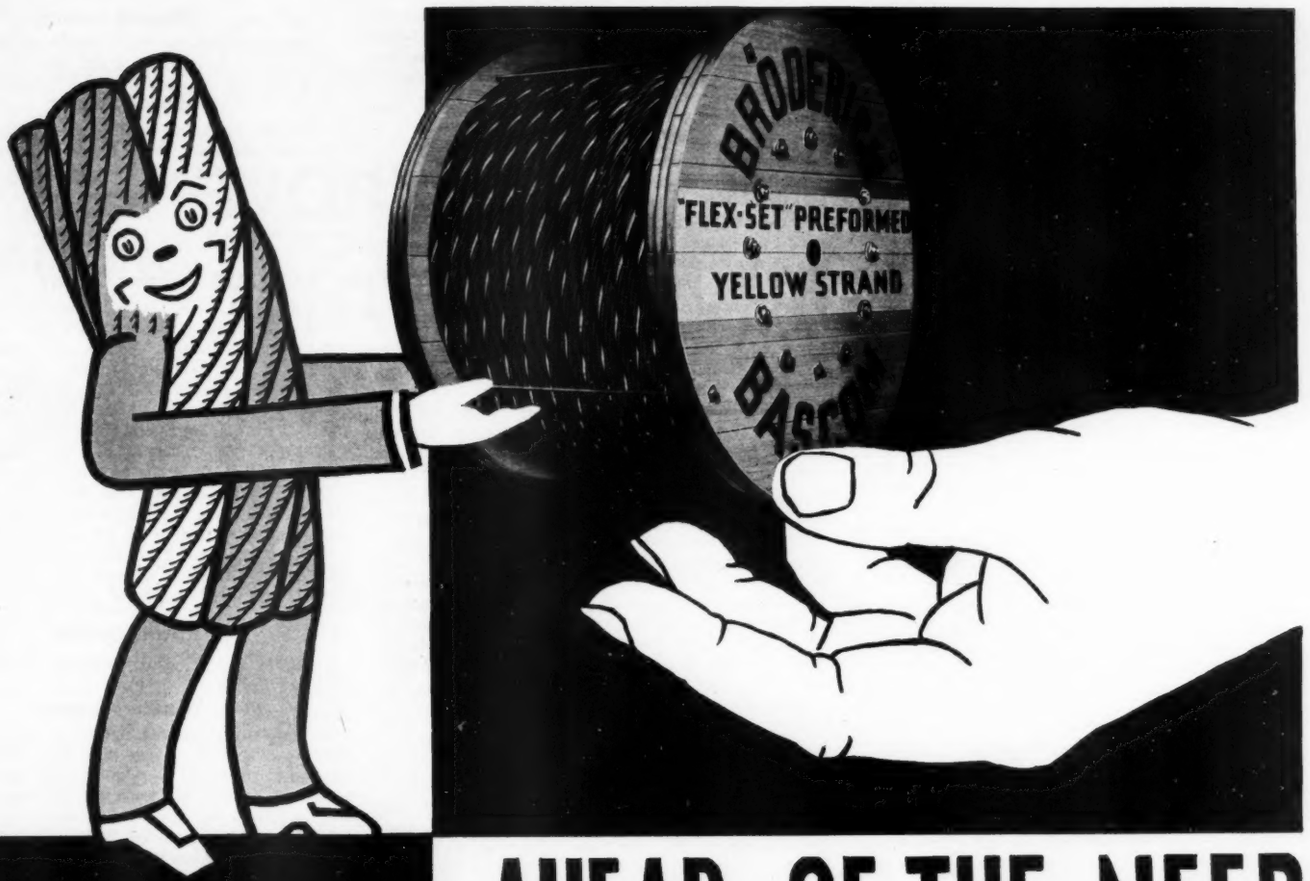
Another Ordovician

Humble Oil & Refining Co.'s Ordovician test in the



Southwest Mapping Co., Fort Worth

Continental Oil Co. outpost in section 44, Block AX, northern Gaines County, is showing for a producer. It is 2½ miles northeast of the Wasson pool, recently opened by Continental Oil Co. and Amon Carter in section 48



V-14

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southwestern part of Jones County, about 3 miles east of the Noodle Creek field, on Teaff Estate lands, in section 33, Block 18, T.&P. Survey, topped the Ellenberger lime at 5,437 feet this week and is drilling below 5,500 feet. It had a slight showing of gas from 5,285-5,305 feet. This is diagonally across the county from Iron Mountain Oil Co.'s recent Canyon lime discovery east of Avoca, which ranks as one of the most important finds in the district this year.

Since the Iron Mountain strike a number of blocks have been taken in the northern and northeastern part of Jones County with the idea of drilling Canyon lime tests on them. Iron Mountain and Jones and Stasney, geologists who geologized the Avoca area for Iron Mountain, have taken a block of 4,000 acres between Anson and Hamlin in the northern part of the county. Location will probably be staked on the Ramsey Cox farm.

M. B. Stanton of Big Spring and J. R. Miller of El Paso have assembled a block of 6,000 acres north of Anson for a 4,000-foot test to be spudded by September 15 and a 2,000-acre block has been taken 3 miles east of that town for a 3,500-foot test which may be drilled in section 34, O.A. Lands. Other blocks have also been reported for the northern part of Jones County, but not confirmed. This part of the county is likely to see an unprecedented wildcat campaign carried on within the next few months as companies and independents seek production from the new deep pay found in the Avoca discovery.

Bond & Harrison are moving in equipment to drill in the northwest corner of the southwest quarter of section 172, B.B.B.&C. Survey, a little over one-half mile south by a little east of the Avoca discovery, which will be an important test as it will either define or extend the new field.

Shallower Pay Horizon

Maracaibo Exploration Co. No. 1 Olander, in the northwest corner of the southeast quarter of section 196, east offset to the Avoca discovery, created more interest in the new Avoca field this week when it logged a sand from 1,436-38 feet that showed good for making a producer estimated between 10 and 30 bbls. per day. This sand, however, was cased off to allow drilling in quest of production from the deeper lime horizon found in the discovery, but the showing made opens a new pay possibility for the field at a shallow depth. This shallower pay horizon may be developed later by drilling twin wells, or plugging back to produce from it when the deeper pay horizon is depleted of oil.

New Jones Pool

Ungren & Frazier No. 1 B. J. Rutledge, about midway between the Guitar pool on the north and the Sayles field on the south, in Jones County, showed for a producer when it logged sand from the same pay horizon found in those fields, from 1,928-29 feet and set casing at 1,924 feet to test. It bailed 4 bailers of oil per hour from the pay before setting pipe and is considered a likely link to the two areas although dry holes have been drilled within a half mile east and west.

Location for three more wildcats around Hawley were made this week, one by Fain-McGaha Oil Corp., 3 miles southwest of the town, one by J. L. Reeves, 4 miles north, and one by Ungren & Frazier, 4½ miles southwest of Hawley. More wildcats have been drilled in this county that any other West Texas county within the past year and a half, the several shallow sand horizons lending incentives to independents, this wildcatting resulting in a number of strikes.

NORTH TEXAS

The Grayson County discovery of Denver Producing & Refining Co. on the Cannon lands, 2½ miles northwest of Whitesboro, which opened the second pool for the county from 11 feet of pay logged between 2,387-98 feet, has encountered trouble in trying to plug off water showing with the high gravity oil swabbed from the hole. Ten sacks of cement failed to shut off the water and later 40 sacks were poured in the hole, the third lot of cement to stand four days before plug is drilled, and test made this week.

A considerable quantity of oil has been hauled from the slush pits to a Gainesville refinery, and if the water can be shut off the well is estimated good for at least 75 to 100 bbls. per day. However, some water may be produced with the oil, which has been testing 36.6 degrees and is dark green in color, a little gas coming with the oil.

The company has a block of 8,000 acres around the well and other tests are expected within the near future. This first test was scheduled to go to 4,000 feet or deep enough to pick up the pay around 3,500 feet which is producing in Big Indian Oil & Development Co. No. 1 B. W. Davis, in Fannin County School Lands Survey, about 3 miles west. That lone producer has been producing for 13 years, making around 10 bbls. of 40 gravity per day.

New South Bend Pay

This week Continental Oil Co. picked up a new pay in its No. 1 Mrs. Ann Brogden Estate, W. H. Byrd Survey in the South Bend pool in southern Young County, the well being estimated good for 60 bbls. per hour from sandy lime logged at 3,925-26 feet. This pay is about 175 or 200 feet above an east offset which was the discovery well, Rathke Oil Co. No. 1 Wadley, which is producing from a true sand around 4,100 feet.

Foard Wildcat

James B. Baker, Jr., has spudded in his No. 1 Long, wildcat 3½ miles southeast of the Thalia field in the southwestern part of Foard County, in section 295, Block A, H.&T.C. Survey. Bason Drilling Co. has contract to drill the 3,500-foot hole in search of production found on the Johnson ranch in the Thalia field.

PANHANDLE DISTRICT

Now and then a new block and wildcat test is reported preparing to start up in the Panhandle district, companies and independents showing more interest in taking such blocks and drilling wildcats in the district within the past six or eight months. A new test just reported is scheduled for a block of 10,000 acres immediately west of Turkey in Hall County. C. J. Barnhart of Oklahoma City and H. M. Hanner of Cement, Okla., assembled this block.

WEST TEXAS COMPLETIONS

Andrews County

Empire Oil & Refining Co. No. 1 Biles, dry and abandoned 5,009 feet, plugged back to 4,675 feet, acidized, elevation 3,395 feet, top solid lime 4,130 feet. Humble Oil & Refining Co. No. 2 Walker, 4,324-4,465 feet, acidized, 1,093 bbls.

Crane County

Donnelly & Sindorf No. 2-A Taylor, 2,025-2,110 feet, acidized, 538 bbls. fluid on pump, 50 per cent water. Gulf Oil Corp. No. 18 Waddell, 3,227-3,509 feet, acidized, 6,512 bbls. Hix & Co. No. 3 Hughes, 2,020-2,104 feet, acidized, 640 bbls. fluid on pump, 10 per cent water. Texas Consolidated Oil Co. No. 8 Hughes, 1,990-2,098 feet, acidized, 574 bbls. on pump.

Ector County

Atlantic Refining Co. No. 4-A Rumsey, 4,160-4,260 feet, shot, 341 bbls. Broderick & Calvert No. 6 Foster, 4,230-69 feet, shot, 601 bbls. Amon G. Carter No. 4 Johnson, 4,077-4,200 feet, acidized, 956 bbls. Devonian Oil Co. No. 2-C Scharbauer, 4,186-4,226 feet, acidized, 1,104 bbls. W. H. Dunning, Jr. No. 2-B Cummins, 4,150-4,275 feet, plugged back to 4,268 feet, shot and acidized, 306 bbls.; No. 4-A Scharbauer, 4,165-4,230 feet, acidized, 1,077 bbls. Empire Oil & Refining Co. No. 3-B Cummins, 4,170-4,250 feet, acidized, 902 bbls. Gulf Oil Corp. No. 28 Goldsmith, 4,145-4,200 feet, shot and acidized, 560 bbls.; No. 30 Goldsmith, 4,160-4,220 feet, 1,073 bbls. Humble Oil & Refining Co. No. 3-B Scharbauer, 4,176-4,249 feet, acidized, 2,149 bbls. Landreth Oil Corp. No. 2-B Cummins, 4,182-4,222 feet, shot and acidized, 360 bbls.; No. 5-F Scharbauer, 4,175-4,225 feet, acidized, 3,072 bbls.; No. 6-G Scharbauer, 4,160-4,224 feet, acidized, 1,512 bbls. Shell Petroleum Corp. No. 2 Cowden, 4,111-4,252 feet, shot, 331 bbls. Stanolind Oil & Gas Co. No. 52 Cowden, 4,135-4,288 feet, shot, 746 bbls. through 1-inch tubing; No. 54 Cowden, 4,088-4,265 feet, shot, 316 bbls.; No. 55 Cowden 4,080-4,246 feet, shot, 312 bbls. Texas Pacific Coal & Oil Co. No. 5 Scharbauer, 4,094-4,242 feet, acidized, 2,504 bbls. York & Harper No. 1 Johnson, 4,180-4,265 feet, shot, 800 bbls.

Fisher County

Sinclair Prairie Oil Co. No. 5 Steele, 3,211-17 feet, acidized, 162 bbls. on pump.

Howard County

Magnolia Petroleum Co. No. 20 Roberts, 2,946-55 feet, 1,277 bbls. on pump, 25 per cent water.

Loving County

Finley & Cherry No. 1 Johnson, dry and abandoned 3,963 feet, top Delaware lime 3,577 feet, top Delaware sand 3,614 feet, elevation 2,972 feet, made little oil.

Mitchell County

Grisham & Hunter No. 1 Morrison, dry and abandoned 3,062 feet, elevation 2,167 feet.

Pecos County

Cardinal Oil Co. No. 2-N Tippett, dry and abandoned 1,304 feet, elevation 2,321 feet. Paul Childress, Trustee No. 18 Smith, 346-65 feet, 60 bbls. on pump. Marion Oil & Gas Co. No. 1 Courtney, abandoned 1,420 feet, elevation 2,952 feet. Joe White and others No. 1 Scharff-Blackman, abandoned 260 feet, elevation 2,426 feet.

Upton County

Arnold Oil Co. No. 4 Harrel, 2,020-2,165 feet, acidized, 1,039 bbls. Brown-Hancock Oil Co. No. 1 Baker, 2,080-2,255 feet, acidized, 930 bbls. on pump; No. 3-A Baker, 2,195-2,368 feet, acidized, 910 bbls. on pump. A. H. Devore and others No. 4 Burleson, 2,120-75 feet, acidized, 645 bbls. on pump. John W. Emch No. 2 Lyon Estate, 2,232-41 feet, acidized, 977 bbls. on pump. R. W. Fair No. 4 Cordova-Union, dry and abandoned 2,292 feet. Homestead Oil & Gas Co. No. 5 Pure-Hughes, 2,640-2,734 feet, acidized, 1,004 bbls. on pump. Pittman and others No. 2 Elder, 2,150-2,326 feet, acidized, 830 bbls. on pump. W. R. Ritchie No. 1 Long, dry and abandoned 2,123 feet, elevation 2,560 feet. Texas Pacific Coal & Oil Co. No. 7-D Lane, 2,353-69 feet, plugged back to 2,363 feet, acidized, 205 bbls. on pump.

Ward County

Eastland Oil Co. No. 3 Johnson, 2,760-2,936 feet, shot, 1,383 bbls.

Winkler County

Empire Oil & Refining Co. No. 5-E Daugherty, 2,900-3,050 feet, acidized, 1,708 bbls. Bert Fields No. 3-B Cowden, 2,782-3,000 feet, shot, 2,015 bbls. Gulf Oil Corp. No. 10 Clapp, 2,780-3,140 feet, shot, 232 bbls.; No. 48 Daugherty, 2,820-3,140 feet, shot, 1,256 bbls. Humble Oil & Refining Co. No. 7-B Colby, 2,716-3,042 feet, shot, 510 bbls.; No. 1 Cowden, 2,801-3,045 feet, shot, 398 bbls.; No. 4-D Walton, 2,787-3,000 feet, shot, 611 bbls. Skelly Oil Co. No. 5 Daugherty, 2,725-3,100 feet, shot, 293 bbls. through 20/64-inch choke. Texas Pacific Coal & Oil Co. No. 2 Thornberry, 2,815-3,050 feet, shot, 1,203 bbls.

Yoakum County

Magnolia Petroleum Co. No. 1 Taylor, dry and abandoned 5,292 feet, elevation 3,607 feet, top lime 4,424 feet.

NORTH TEXAS COMPLETIONS

Archer County

L. T. Burns No. 1 J. M. Collins, 1,456-58 feet, 27 bbls., wildcat; No. 1 J. R. Garvey, 860 feet, dry. S. H. Huggins No. 16 Walter Ford, 985-1,000 feet, 10 bbls. G. J. Scholl No. 4 Claude Cowan, 1,071 feet, dry.

Baylor County

Consolidated Oil Co. No. 4 W. H. Portwood Z, 1,367-73 feet, 5 bbls.

Cooke County

A. D. Robinson No. 9 J. H. Otto A, 1,255-70 feet, 65 bbls. Schermerhorn Oil Co. No. 9 Mary Kessler, 1,268-97 feet, 25 bbls. Whitfield Pearson & Grimes No. 1 C. F. Bundy, 2,082-2,158 feet, 5 bbls., wildcat.

Grayson County

Mildred Oil Co. No. 1 F. R. DeCordova, 4,215 feet, dry.

Montague County

Continental Oil Co. No. 8 Mrs. A. B. Hinton, 746-76 feet, 12 bbls.; No. 37 N. J. Howard, 1,132-53 feet, 35 bbls.; No. 38 N. J. Howard, 1,135-59 feet, 25 bbls.; No. 23 N. J. Howard A, 1,384-96 feet, 60 bbls.

Wilbarger County

Daniel Production Co. No. 5 W. T. Waggoner C, 1,910 feet, dry. Falcon Oil Co. No. 1 W. T. Waggoner, 2,951 feet, dry. Humble Oil & Refining Co. No. 25 W. T. Waggoner H, 3,075-79 feet, 720 bbls.

Wichita County

Continental Oil Co. No. 19 Waggoner C, 1,299-1,316 feet, 56 bbls. G. W. Cooper No. 25 W. T. Waggoner C, 1,624-32 feet, 225 bbls. Deep Oil Development Co. No. 11 Munger A, 3,718-3,870 feet, 538 bbls. Douglas Production Co. No. 33 L. P. Douglas A, 328 feet, dry. Panhandle Refining Co. No. 15 L. F. Ramming, 1,649-1,744

(Continued on Page 76)

Oklahoma Operations

By DAL DALRYMPLE

WORK STARTING AT OUTPOST TESTS IN SEVERAL SECTORS

Wildcat exploration is continuing in Oklahoma with little curtailment during the summer and with varying results. One wildcat pool opener was completed and five outpost tests were abandoned the past week. Two other tests not yet completed were considered as pool openers, showings of oil or gas were reported in a few others, and several were drilling ahead without any indication of production.

Roodhouse and others No. 1 Booth, SE NW SE section 20-2n-6, northwest of the Fitts field in Pontotoc County, swabbed 155 bbls. of oil in 24 hours from Cromwell sand topped at 3,000 feet. It was drilled to 4,966 feet, plugged back and shot at 3,021-32 feet, 3,088-92 feet and 3,094-3,110 feet.

Carter Oil Co. and others No. 1 Hamilton, C W half NE SW section 33-4n-9, near Citra in southwestern Hughes County, was cleaning out to bottom and swabbed 145 bbls. of oil in 12 hours. Total depth is 5,993 feet.

Carter Oil Co. and others No. 1 Harley, C NE NE section 24-2s-4w, Milroy sector, southeastern Stephens County, deep test that has had several shows of oil and gas, was drilling ahead below 7,830 feet in shale.

Work was starting at several new wildcat tests. In Cleveland County, Hollenbeck & Fain Drilling Co. No. 1 Ward, SW SE NE section 30-7-1e, east of Lexington, was drilling below 1,300 feet. Phillips Petroleum Co. No. 1 Beck, SE SW SW section 8-1n-9, southwest of Tupelo in Coal County, a Wilcox sand test, was rigged up and ready to spud. Phillips Petroleum Co. was clearing location at No. 1 Thomas, NW NW SE section 16-7-12, near Scipio in northwestern Pittsburgh County, for a 7,000-foot Wilcox sand test. Oklahoma District Oil Co. was reported rigging up tools to resume work at its wildcat in NE NE SW section 7-7-14, near Lake McAlester, Pittsburgh County, after being shut down for several months at 5,185 feet. V. K. Chapman and others No. 1 Hallum, NW NW section 4-7s-20, southeast of Fort Towson, Choctaw County, had spudded with machine and was waiting for water. Work had started at two Tillman County outposts, the Indian Territory Illuminating Oil Co. and others No. 1 Graham, NW SW NE section 1-3s-19w, southwest of Frederick, and Gulf Oil Corp. No. 1 Prichard, SE NW SE section 32-3s-16w, south of Hollister.

Wildcat Completions

Wildcat tests completed in Oklahoma the past week included one pool opener and five failures.

The pool opener was Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 1 Billington B, SW SE SW section 32-9-3e, southwest of Tecumseh, Pottawatomie County. It topped Hunton lime at 4,795 feet, Sylvan shale 5,000 feet, Viola lime 5,080 feet, Simpson Dense 5,125 feet, Dolomite, the producing horizon, 5,165 feet, Wilcox sand 5,316 feet, total depth 5,321 feet. It was plugged back to 5,238 feet, swabbed 48 bbls. of oil in six hours; was acidized, flowed 349 bbls. of oil net in six hours and was completed, flowing about 400 bbls. of oil daily.

Nels Button and others No. 1 Burch, SE SE SW section 3-3n-1w, Garvin County, was dry and abandoned at 4,605 feet, total depth, when Schlumberger test indicated water.

W. A. Delaney and others No. 1 Payton, NE NE SE section 1-4n-7, Pontotoc County, an old well deepened from 2,077 feet to second Wilcox sand at 4,227 feet, total depth 4,324 feet, was dry and abandoned.

Clark Drilling Co. and W. A. Delaney No. 1 Richardson, SE SE NW section 30-4n-8, Pontotoc County, had second Wilcox sand at 4,646 feet and was dry and abandoned at 4,760 feet, total depth.

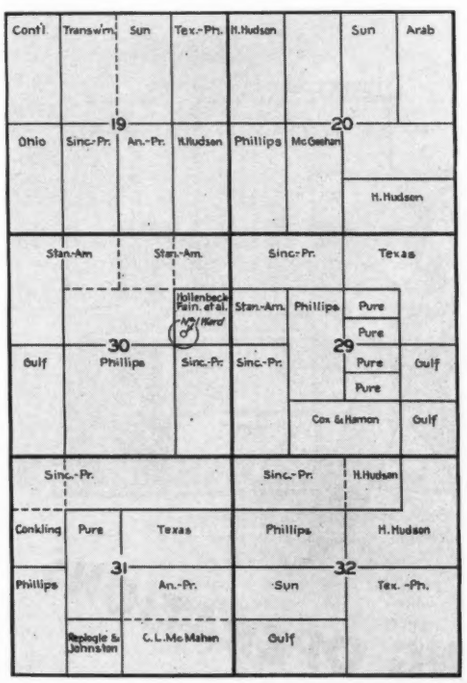
Carter Oil Co. No. 1 Wells, C E half SE NW section 30-23-5e, Pawnee County, had a hole full of water in Bartlesville sand at 3,215-45 feet, total depth, and was dry and abandoned.

Norbia Oil Co. No. 1 Osage, SE cor. section 36-23-6, Osage County, found Mississippi lime at 2,858 feet and was dry and abandoned at 2,876 feet, total depth.

Pontotoc County

Ten wells were completed in the Fitts field, Pontotoc County, the largest producer being Sinclair Prairie Oil Co. No. 3 McCarty, NW NE NE section 22-2-7. After topping Hunton lime at 3,964 feet and stopping at 4,054 feet, total depth, it was treated with acid, flowed 731 bbls. of oil in three hours and made potential of 4,601 bbls.

Other completions in the Fitts district were as follows: Arrow Drilling Co. No. 3 Lewis, SW SW SE section 19-2n-7, Viola lime 4,094 feet, Bromide 4,360 feet, total depth 4,364 feet, acidized, flowed 274 bbls. of oil gross in four hours, potential 828 bbls.



Mid-Continent Map Co., Tulsa

Hollenbeck & Fain Drilling Co. were drilling ahead below 1,300 feet at No. 1 Ward, section 30-7-1e, Cleveland County wildcat

Fleetborn Oil Corp. No. 1-A Lewis, SE SE SW section 19-2-7, Hunton 3,685 feet, total depth 3,975 feet, acidized, flowed 342 bbls. of oil gross in three hours, potential 1,068 bbls.

F. O. Akin No. 4 Daniels, NE NE SW section 21-2-7, Hunton lime 3,780 feet, total depth 3,839 feet, acidized, flowed 120 bbls. of oil gross in one hour, reacidized, flowed 550 gross in three hours, potential 2,047 bbls.

E. H. Moore No. 1-B Moody, NW cor. section 26-2-7, Cromwell sand 2,570 feet, total depth 2,667 feet, plugged back to 2,615 feet, pumped 50 bbls. of oil in 10 hours, later pumped 67 bbls. in 24 hours. Same operator's No. 4-A Woodruff, NW NW SE section 29-2-7, Cromwell 2,485 feet, total depth 2,640 feet, flowed 53 bbls. of oil in nine hours.

Amerada Petroleum Corp. No. 10 Smith, NW SE NW section 28-2-7, Cromwell 2,400 feet, total depth 2,545 feet, flowed 467 bbls. of oil daily.

Bishop Oil Co. No. 4-B Simpson, NE NW NW section 28-2-7, Cromwell 2,559 feet, total depth 2,670 feet, flowed 111 bbls. in seven hours.

Magnolia Petroleum Co. No. 22 Simpson, NW NE NE section 29-2-7, Cromwell 2,587 feet, total depth 2,608 feet, flowed 60 bbls. of oil in 24 hours. Same company's No. 24 Simpson, SE NE NE section 29-2-7, Cromwell 2,480 feet, total depth 2,585 feet, flowed 240 bbls. of oil in 24 hours.

New work in Pontotoc County: Patsy Oil Co. No. 1 Mayhue, NW NE SE section 20-2-6 rig; Stahl Petroleum Corp. No. 4-C Dennis, SE SW SW section 21-2-7, building rig; J. E. Crosbie, Inc., No. 2-C Burris, NW NW SW section 22-2-7, cellar and pits; Phillips Petroleum Co. No. 1 Leedy, NE cor. section 22-2-7, location; Sinclair Prairie Oil Co. No. 4 McCarty, NW NW NE section 22-2-7, cellar and pits; same company's No. 5 Moody B, NW NE NW section 22-2-7, location; Shell Petroleum Corp. No. 3 McKinley, SE SW NE section 23-2-7, rigging up rotary; E. H. Moore No. 2 Thompson, SE cor. section 33-2-7, an old well plugged back, shot, acidized, 60 bbls. of oil in seven hours on gas lift; Carter Oil Co. and Gulf Oil Corp. No. 1 Thompson, C E half SE NW section 1-1n-7, location; Sinclair Prairie Oil Co. No. 1 Rogers, SW NE SE section 1-1n-7, location.

Estimated Daily Production

Estimated daily production of Oklahoma for the week ending July 31, and for the preceding week, was as follows:

	Barrels	
	July 31	July 24
Allen	5,450	5,350
Billings	7,475	7,425
Burbank	8,200	7,750
South Burbank	15,000	15,300
Balance Osage	21,500	21,300
Blackwell district	5,225	5,575
Bristow-Slick	7,450	7,525
Chandler	3,000	3,025
Crescent	8,475	6,775
Cromwell	3,325	3,300
Cushing-Shamrock	10,900	10,750
Duncan district	4,275	3,950
Edmond	18,750	18,450
Fish	6,250	6,350
Fitts	97,650	100,425
Jesse	3,475	4,400
Graham	4,525	4,500
Gray	1,150	1,125
Healdton	9,900	10,000
Hewitt	4,475	4,350
Holdenville	925	925
Keokuk	9,350	9,650
Konawa	1,500	1,525
Lucien	15,425	16,075
Moore	11,125	10,900
Oklahoma City	153,750	151,725
Olympic	13,450	13,400
Polo	1,050	1,000
Sasakwa and townsite	2,475	2,575
Sholem-Alechem	3,125	3,100
Seminole:		
Bowlegs	11,725	11,600
Carr City	5,525	5,425
Earlsboro	6,225	6,200
South Earlsboro	725	700
East Earlsboro	7,300	7,300
Little River	11,350	11,450
East Little River	1,100	1,150
Maud	750	725
Mission	2,250	2,150
Seminole	9,650	9,650
East Seminole	3,350	3,225
Searight	4,325	4,350
Total Seminole	64,275	63,925
St. Louis-Pearson	20,850	20,700
Tatums	5,725	5,625
Tonkawa-Garber-Thomas	5,000	4,900
Wewoka	3,325	3,250
Yale-Jennings	4,250	4,225
Other pools	75,600	76,150
Total Oklahoma	637,650	637,275

Noble County

Phillips Petroleum Co. and Shell Petroleum Corp. No. 4 O'Neil, SW SW SE section 16-23-2w, on the north side of the Billings pool, Noble County, found Wilcox sand at 4,250 feet, was bottomed at 4,265 feet, flowed

729 bbls. of oil in six hours and made potential of 2,710 bbls.

Continental Oil Co. No. 4 Conway, SE NE NW section 21-23-2w, flowed 305 bbls. of oil in six hours and made potential of 1,365 bbls. Top of Wilcox sand was 4,287 feet, total depth 4,321 feet.

Continental Oil Co. No. 5 Conway, SW SE NW section 21-23-2w, had Wilcox sand at 4,295 feet, total depth 4,312 feet, flowed 938 bbls. of oil in six hours and made potential of 3,956 bbls.

Billings producing limits apparently were defined on the southwest at Tide Water Associated Oil Co. No. 4 Shaffer, NE NW SW section 21-23-2w. It had a hole full of water in Wilcox sand at 4,353-54 feet, total depth, plugged back to 3,715 feet and perforated casing but water again intruded and it was abandoned.

New operations reported in Noble County: Lincoln Oil Co. and others No. 2-A O'Neil, NW NW SE section 16-23-2w, cellar; Continental Oil Co. No. 7 Conway, NW SE NW section 21-23-2w, rig; Ohio Oil Co. No. 1 Masheters, NW SE NE section 24-22-2e, location; Seaboard Western Oil Co. and others No. 1 Guthrie, NW NW NE section 6-20-2w, location.

Grant County

Prunty Production Co. No. 4 Martin, NW SW SW section 23-27-3w, Deer Creek area, Grant County, had Wilcox sand at 3,977-4,108 feet, Arbuckle lime 4,215 feet, total depth 4,247 feet, was acidized and swabbed and flowed 760 bbls. of oil in 24 hours. When completed, it was swabbing at the rate of 100 bbls. of oil and 15 bbls. of water daily.

Kay County

Shell Petroleum Corp. and Continental Oil Co. No. 7 Biddle, SE NE SW section 5-28-1w, Kay County, had Layton sand at 2,755 feet, total depth 2,788 feet, was shot and flowed 196 bbls. of oil in 24 hours, completed.

Lincoln County

One of the larger wells completed in Oklahoma the past week was in Lincoln County at Phillips Petroleum Co. No. 1 Witwer, SW SE NE section 35-15-2e. It topped Wilcox sand at 5,098 feet, was bottomed at 5,129½ feet, flowed 889 bbls. of oil in six hours, and made potential of 3,372 bbls.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 2 Aranwine, SE NE SE section 35-15-2e, had Wilcox sand at 5,103 feet, total depth 5,124 feet, and made potential of 677 bbls. of oil.

Skelly Oil Co. No. 2 West Sporn, NE NW SW section 21-17-3e, topped Wilcox sand at 4,568 feet, total depth 4,624 feet, plugged back to 4,615 feet, flowed 50 bbls. of oil in 24 hours, perforated casing and flowed 80 bbls. of oil and 15 bbls. of water in 24 hours.

Two new operations in Lincoln County were reported: Phillips Petroleum Co. No. 2 Witwer, NW SE NE section 35-15-2e, location; Summit Drilling Co. and others No. 2 Eakers, SE NE SW section 35-15-2e, rigging up rotary.

Pottawatomie County

Producers, Inc., No. 4 Cardwell, NW SW NW section 15-7-4, Pottawatomie County, found Earlsboro sand at 3,522 feet, total depth 4,180 feet, plugged back to 3,540 feet, was shot and flowed 60 bbls. of oil in 24 hours.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 3 Rushing, NE SW SE section 32-11-4, Shawnee pool, had Earlsboro sand at 4,385 feet, total depth 4,445 feet, and flowed 484 bbls. of oil in 24 hours.

Vierson and others No. 1 Kubon Heirs, SW cor. section 13-11-6, topped Hunton lime at 4,195 feet, total depth 4,603 feet, plugged back to Hunton lime, was shot and acidized, and pumped 168 bbls. of oil and an estimated 168 bbls. of water in 24 hours.

J. F. Smith No. 1 Cockrell, SE SW NE section 35-8-4, new test in Pottawatomie County, was a rig.

Seminole County

Texas Co. No. 1 Wright, NW NW NE section 32-7-6, Seminole County, had Boggy sand at 2,905 feet, total depth 2,936 feet, was shot and swabbed and flowed 288 bbls. of oil in 24 hours.

Texas Co. No. 2 Grisso, NW cor. section 16-9-7, was bottomed at 4,422 feet, plugged back to 3,349 feet, shot pipe, salt water intruded and it was abandoned.

New work in Seminole County: Bert Aston No. 2 Huddleston, SE SW NW section 32-6-6, wildcat, spudded; Amerada Petroleum Corp. and others No. 3 Riddle, NE NW NE section 2-10-5, rig; Sinclair Prairie Oil Co. No. 1 Yahola, SE SE NE section 29-10-8, rig; Foster Development Co. No. 1 Yahola, SW SE SW section 22-10-8, cellar and pits; Malernee & Shelton No. 5 Flowers, SE SW SE section 29-7-6, location; same operator's No. 1 Huddleston, NE SW NE section 32-7-6, location; same operator's No. 2 Huddleston, SE SW NE section 32-7-6, location; Texas Co. No. 2 Wright, NE NW NE section 32-7-6, location.

Hughes County

Rogers & Rogers No. 2 Judy, SW cor. section 5-6-8, Hughes County, had Booch sand at 2,739-56 feet, was bottomed at 2,917 feet, plugged back to 2,760 feet, was shot and flowed 62 bbls. of oil and 8 bbls. of water in 24 hours.

First reports of new Hughes County operations: Amerada Petroleum Corp. No. 2 Stewart, NE SW NW section 31-9-9, location; Sinclair Prairie Oil Co. No. 17 Oliphant, C SE section 1-9-8, building rig; A. Michelson and others No. 1 Turner-Lucas, NW NW SE section 29-7-8, machine.

Garvin County

Cox & Hamon No. 6 Harris, SW SW NW section 32-1n-3w, Garvin County sector of the Tussy pool, was bottomed at 3,425 feet and produced 75 bbls. of oil in 24 hours.

Wrightsmith No. 5 Yates, NW NW SW section 33-1n-3w, was abandoned when water intruded at 2,640-70 feet, total depth.

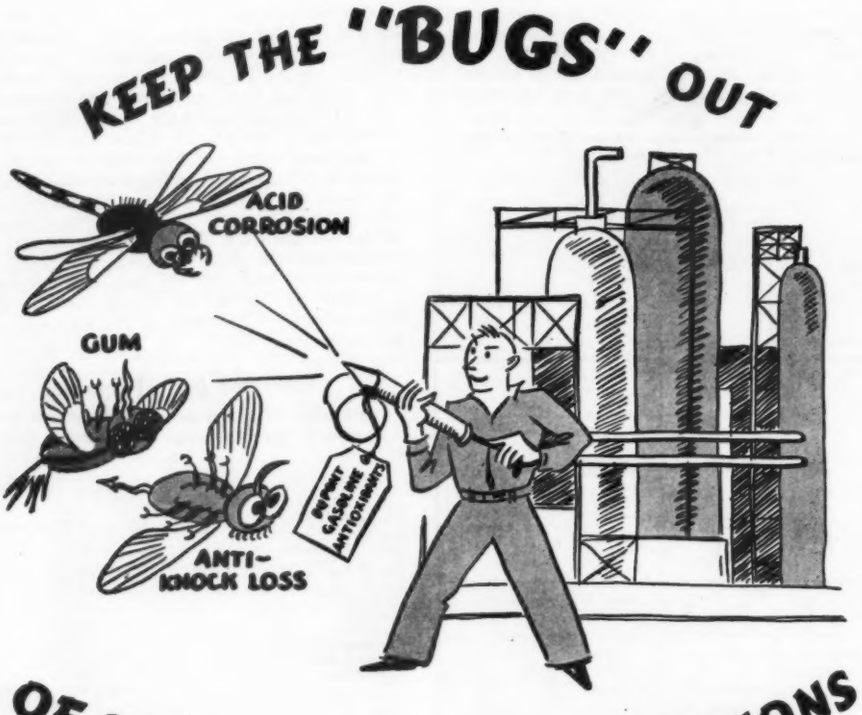
Osage County

Ray Branstetter No. 6 Osage, SE SW SW section 28-22-11, Osage County, swabbed 85 bbls. of oil daily from Arbuckle lime at 2,068-83 feet, total depth, and was completed.

Lewis Production Co. No. 2 Osage, SW NW NW section 33-24-7, had sand at 2,590-2,658 feet, total depth 2,665 feet, plugged back to 2,658 feet, was shot and produced 119 bbls. of oil daily.

Barnsdall Oil Co. No. 7 Osage, NE SE NE section 35-25-11, had Bartlesville sand at 1,725-47 feet, total depth, and swabbed 26 bbls. of oil in 24 hours.

Texas Co. No. 2 Osage, SW NE SW section 1-27-7, topped Chat at 2,510 feet, first oil at 2,548 feet, total depth 2,557 feet. It flowed 56 bbls. of oil in six hours; later flowed 54 bbls. of oil, with 2,000,000 feet of gas.



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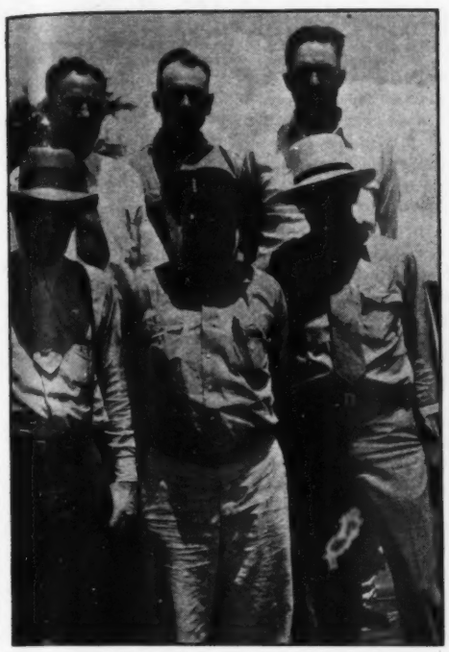
DU PONT

GASOLINE ANTIOXIDANTS

R. L. Lamar No. 72 Osage, SE SW NW section 24-27-10, pumped 5 bbls. of oil daily from Mississippi lime at 1,856 feet, total depth 1,894 feet.

Pure Oil Co. No. 4 Osage, SE NW NW section 36-22-8, was dry and abandoned at 1,106 feet, total depth. Peters Petroleum Corp. and Sinclair Prairie Oil Co. No. 17 Osage, SW NW NE section 24-24-7, was completed as a repressure well at 770 feet, total depth Wolverine Oil Corp. and others No. 22 North Avant



These men were holding a conference on a special cementing job on a well near St. Louis, Okla. Front row: J. N. Risher, drilling contractor, Shawnee, Okla.; R. C. Glover, field engineer, Baker Oil Tool Co., Oklahoma City, Okla.; H. A. Williams, research chemist, Lone Star Cement Co., Dallas, Tex. Back row: Dean Hanes, engineer, Halliburton Oil Well Cementing Co., Duncan, Okla.; W. H. Massey, cementer, Seminole, Okla.; J. L. McBride, district superintendent, Halliburton Oil Well Cementing Co., Seminole, Okla.

Unit, SE NE SE section 31-24-12, was completed as an input well at 1,745 feet, total depth, and No. 23 North Avant Unit, NE SE SE section 31-24-12, was an input well at 1,760 feet, total depth.

New work in Osage County: Ray Branstetter No. 2 Osage, NE NW NW section 33-22-11, cellar and pits; Opal Twyman No. 1 Osage, SW NW SE SW section 20-23-11, location; same operator's No. 1-A Osage, SE NE NW NW section 28-23-11, location; Barnsdall Oil Co. No. 24 Osage, NE NW SE section 18-23-12, location; Wolverine Oil Corp. Nos. 18, 19 and 25 North Avant Unit, all in section 31-24-12, locations; same operator's No. 24 North Avant Unit, SE NW SW SW section 31-24-12, drilling at 775 feet; Peters Petroleum Corp. and Sinclair Prairie Oil Co. No. 18 Osage, SE NW NW NE section 24-24-7, location.

Okfuskee County

Earl Evans and others No. 4 Smith, SW NE NW section 36-10-8, Olympic field, Okfuskee County, had Senora sand at 1,728 feet, total depth 1,751 feet, plugged back to 1,749 feet, and pumped 40 bbls. of oil and an estimated 150 bbls. of water daily.

Sinclair Prairie Oil Co. No. 7 Palmer, SW SE NW section 19-10-9, had Senora sand at 1,841 feet, total depth 1,854 feet, was shot and pumped 37 bbls. of oil in 24 hours.

Lease Investment Co. No. 1 Porter, SW SE SE section 4-13-10, had Wilcox sand at 3,378 feet and was dry and abandoned at 3,407 feet, total depth.

Grimes & Neal No. 7 Wind, NW SE NE section 35-11-9, new Okfuskee County test, had spudded.

Okmulgee County

J. E. Dow No. 1-A Stevens, CSL NE NE section 9-14-14, Okmulgee County, was shot and pumped 3 bbls. of oil daily from Booch sand at 1,206 feet, total depth 1,231 feet.

Texas Co. No. 12 Lewis, SW NE SW section 20-15-14, had Dutcher sand at 1,672-1,751 feet, total depth, and pumped 25 bbls. of oil daily.

John Scohy No. 1-B Roberts, SE SW NW section 33-15-13, was dry and abandoned at 2,008 feet, total depth.

Creek County

Texas Co. No. 17 McIntosh, SW NW SW section 3-17-7, Drumright area, Creek County, had Bartlesville sand at 2,648 feet, total depth 2,730 feet, and pumped 120 bbls. of oil in 24 hours.

J. H. Wright No. 5 Davis, C E half NW SE section 23-17-10, pumped 3 bbls. of oil daily at 2,534 feet, total depth. Big Four Petroleum Co. No. 1 Smith, NE cor. section 13-19-7, flowed 90 bbls. of oil in 18 hours from Skinner sand at 2,479 feet, total depth 2,507 feet. George Sawyer No. 2 Jackson, NW NE SE section 14-19-9, was bottomed at 1,300 feet, plugged back to 1,295 feet, was shot, flowed 25 bbls. of oil in the first 24 hours and 33⅓ bbls. the second day. George A. Campbell No. 4 Purcell, SW NW NE section 22-19-9, had Wilcox sand at 2,762 feet, total depth 2,766 feet, plugged back to 2,270 feet and pumped 10 bbls. of oil daily.

New work in Creek County: Link Oil Co. No. 8 Jones, SE NW SE section 32-18-7, old well, moving in machine to deepen; Texas Co. No. 6 McIntosh, NE NW NE SW section 3-17-7, an old well, cleaning out; Schoolcraft & Ferguson No. 6 Fulkerson, NE SW SE NW section 5-17-7, an old well being deepened, drilling at 2,233 feet; Big Four Petroleum Co. No. 2 Smith, NW NE NE NE section 13-19-7, location; Texas Pacific Coal & Oil Co. No. 1 McIntosh, NE cor. section 21-17-9, drilling at 585 feet; A. W. Swift and others No. 2 Hayden, NE NE NW section 13-19-9, drilling at 1,282 feet; Strozier Drilling Co. No. 2 Anthony, SW NW SE section 12-16-11, machine.

Muskogee County

Robinson Oil Corp. No. 2 Brown, C N half SE NE section 18-13-16, an old Muskogee County well, was deepened from 2,002 feet to 2,023 feet and produced 6,500,000 feet of gas daily, completed.

New work in Muskogee County: Robinson Oil Corp. No. 4 Brown, C NE section 18-13-16, machine; R. E.

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Downing No. 1-A Fisher, CSL SE SW section 31-16-15, rigging up; W. B. Pine No. 1 Mathews, NE SW NW section 19-15-15, location; E. J. Metzger No. 1-A Simmons, CEL W half SE section 4-15-15, moving in machine; F. E. Cusack No. 1 Elliott, CNL NW SW section 20-15-20, rigging up; same operator and others No. 1 Mrs. F. E. Cusack, NE SW SE section 20-15-20, rigging up.

Tulsa County

Swift Brothers No. 1-A Bridges & Meyers, C S half S half NE section 14-19-10, Tulsa County, had Cleveland sand at 805-825 feet, total depth, and pumped 4 bbls. of oil daily with lots of water.

Somerset Oil Co. No. 3-A Murray, CNL NW SW section 36-17-12, new Tulsa County test, was a rig.

Stephens County

Skelly Oil Co. No. 30 Selby, NW NW NW SW section 26-1s-5w, Stephens County, was bottomed at 961 feet, plugged back to 958 feet, and pumped 16 bbls. of oil daily.

Raizen Brothers No. 2-A Meyers, SE NW NW section 34-1s-5w, plugged back from 767 feet, total depth, to 756 feet and pumped 2½ bbls. of oil daily.

Carter County

Magnolia Petroleum Co. No. 72 Richards, NW SW NE section 6-4s-3w, was bottomed at 1,150 feet, was shot and pumped 63 bbls. of oil in 24 hours. It is in the Healdton field, Carter County.

H. F. Potts No. 1 Franklin, SE cor. section 9-1s-2w, was coring below 541 feet.

Jefferson County

Farlyn Oil Co. No. 47 Seay, C E half E half SE section 3-7s-5w, Jefferson County, pumped 20 bbls. of oil daily and was completed at 1,090 feet, total depth.

Long-Yingling-Lauck No. 22 Seay, SE SW SW SE section 3-7s-5w, was drilling at 1,065 feet.

Cotton County

Lawton Oil Corp. No. 1 Chambers, SW cor. section 35-1s-10w, Cotton County, was abandoned at 2,275 feet, total depth.

Other New Operations

In Coal County, Carter Oil Co. and Gulf Oil Corp. No. 1 Buck, C E half SE SW section 6-1n-8, was a location.

In Greer County, J. I. Medlin and others No. 1-E Broudie, NW cor. section 5-6n-20w, was a location.

In Stephens County, George L. Pace and others No. 12 Gelworth, SW SW NW section 2-2s-8w, was rigging up rotary.

In Logan County, Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 1 Knight, SW cor. section 12-17-1w, was a location; Champlin Refining Co. No. 8 Pfeiffer, NE SE NW section 4-19-2w, was cellar and pits; Mid-Continent Petroleum Corp. No. 3 Bulling, NW NE NE section 5-19-2w, was moving in rig.

West Texas Fields

(Continued from Page 72)

feet, 10 bbls. Perkins & Cullum No. 2 T. L. Burnett A and others, 1,511-22 feet, 25 bbls., wildcat. Jennings Drilling Co. No. 2 Jennings Estate A, 954-61 feet, 5 bbls. Pois & Schulz No. 3 Foster B, 1,261-71 feet, 110 bbls. S. H. Walton No. 10 Gulf Tank Farm, 620 feet, dry.

Young County

Buchanan & Dickerson No. 1 J. W. Cox, 632 feet, dry. Gorsuch Oil Co. No. 24 Mathews, 750 feet, dry. Hawkins & Glover No. 5 Rushing, 1,003 feet, dry; No. 6 Rushing, 1,001 feet, dry. Hickok & Reynolds No. 1 A. P. Martin, 2,103-16 feet, 135 bbls., wildcat. Lupton & McLester No. 2 J. G. Choate, 3,609-36 feet, 345 bbls. Pitzer & West No. 1 Norton Property B, 3,877-3,925 feet, 210 bbls., wildcat. R. E. Skinner No. 2 Rickman, 1,834 feet, dry. Sperling & Collier No. 1 Scott, 2,345-66 feet, 40 bbls. D. L. Wolf No. 1 Mrs. F. Clark, 855 feet, dry. W. W. Woolsey No. 1 S. H. Simmons, 1,000 feet, dry.

CENTRAL TEXAS COMPLETIONS

Eastland County

Barnett Petroleum Corp. No. 2 Downtain, 1,487-99 feet, initial production 25 bbls. L. A. Thompson No. 1 Fox, total depth 1,238 feet, dry and abandoned.

Jack County

Big Six Oil Co. No. 2 Tishie, 2,850-3,043 feet, initial production 40 bbls. Everts Drilling Co. No. 1 Bryson, 3,060-69 feet, initial production 50 bbls. Hill & Hill No. 1 Hickman, 3½ miles E Bryson, oil showing 2,910-3,081 feet, broken, total depth 3,100 feet, initial production 231 bbls. Josaline Production Co. No. 1 Beasley, 2,922-48 feet, initial production 136 bbls. Mar-Tex Oil Co. No. 6 Jones, oil showing 2,929-36 feet and 3,066-79 feet, total depth 3,105 feet, initial production 302 bbls. Moncrief & Showers No. 6 Jones, 3,139-3,203 feet, total depth 3,222 feet, initial production 563 bbls. Nelson Oil Syndicate No. 1 Birdwell, 2,972-80 feet, total depth 3,100 feet, plugged back 2,985 feet, initial production 2,000,000 feet of gas. Ohio Fuel Supply Co. No. 1-A Rhodes & Kuykendall, 2,955-2,990 feet, initial production 521 bbls. Burk Royalty Co. and Target Drilling Co. No. 1 Jones, 2,990-3,112 feet, initial production 414 bbls. B. N. Tidwell No. 1 Chambers, 3,019-26 feet, initial production 40 bbls. R. C. Veighl and others No. 2 W. R. T. Ezell, 2,918-45 feet, initial production 533 bbls.

Jones County

R. B. Farris No. 3 Guitar, 1,974-2,001 feet, initial production 591 bbls. T. D. Humphrey No. 2 Guitar A, 1,987-2,003 feet, initial production 643 bbls. N. H. Martin & Son No. 7 Dorsey A, 2,185-2,209 feet, initial production 342 bbls; No. 9 Dorsey A, 2,148-60 feet, initial production 40 bbls. Texas Inland Oil Co. and others No. 1 Rowell, total depth 2,331 feet, dry and abandoned.

Shackelford County

Danciger Oil & Refining Co. No. 2 Davis, total depth 1,980 feet, dry and abandoned. Eppenauer Drilling Co. No. 1 Morris B, 1,579-1,600 feet, initial production 4 bbls. Roeser & Pendleton No. 37 Dawson & Conway, 1,582-90 feet, initial production 40 bbls.

PANHANDLE DISTRICT

Carson County

Magnolia Petroleum Co. No. 27 fee, 2,925-3,000 feet, shot, 366 bbls. on pump.

Gray County

Empire Oil & Refining Co. No. 4 Jackson, 3,180-3,249 feet, shot, 446 bbls. on pump. Kewanee Oil & Gas Co. No. 12 Morgan, 3,175-3,280 feet, shot, 823 bbls. on pump; No. 3-B Morse, 2,671-2,773 feet, shot, 258 bbls. on pump; No. 3 McKinney, 3,179-3,284 feet, shot, 584 bbls. on pump. Phillips Petroleum Co. No. 2 McKinney, 3,160-3,259 feet, shot, 224 bbls. on pump. Sinclair Prairie Oil Co. No. 3-A Merten, 3,130-65 feet, shot, 106 bbls. on pump.

Hutchinson County

Drilling & Exploration Co. No. 11 Watkins, 2,875-2,991 feet, shot, 576 bbls. on pump. McIlroy and others No. 3 Haile, 2,970-3,050 feet, shot, 811 bbls. on pump. Texas Co. No. 3 Herring, 3,130-3,200 feet, shot, 125 bbls. on pump. Travelers Oil Co. No. 4 Haile, 3,010-60 feet, shot, 386 bbls. on pump.

Moore County

Red River Gas Co. No. 2-A Shelton, 2,130-2,523 feet, 45,250,000 feet gas. Shell and others No. 1-A Donelson, 2,772-3,145 feet, 91,000,000 feet gas.

Wheeler County

Remo Royalto Co. No. 1 Harvey, dry and abandoned 2,336 feet.

Eastern Fields

(Continued from Page 60)

former Big Lime gas well completed about 1922 at 1,470 feet, began flowing 2 bbls. a day from the casing.

In Pleasants County, W. C. Patterson completed No. 1 W. D. Dye heirs in Washington district at 1,380 feet, the Maxton sand, good for 1 bbl. In McKim district, Dinsmoor & Co. drilled No. 8 J. E. Cunningham through the Cow Run to 513 feet and it was dry with little sand.

In Roane County, K. M. Hunt and others completed No. 2 Goldie M. Riddle, in Curtis district, in the Salt sand at 1,750 feet. The sand was topped at 1,688 feet with oil at 1,725-50 feet; and starting off at 5 bbls. it is now showing for 20 bbls. In this district, Henderson Oil Co. completed No. 4 E. S. Ball through the Salt sand to 1,835 feet and it is dry.

Gas Wells

In Boone County, Owens Illinois Glass Co. completed No. 2 Letha B. Myers Tract B in Washington district, at 2,202½ feet, with 103,000 feet of gas at 2,146-51 feet.

In Braxton County, Pittsburgh & West Virginia Gas Co. completed No. 7,610 J. R. Stump in Birch district in the Slate at 4,842 feet.

In Cabell County, Fisher Gas Co. completed a test on the C. W. Fisher farm in Guyandotte district at 2,633 feet, gauging 342,000 feet.

In Calhoun County, Dunn Mar Oil & Gas Co. completed No. 2 Leslie Arnold in Washington district at 1,774 feet, gauging 368,000 feet. In Center district, J. H. Ferrell and others completed No. 2 James Ferrell at 2,367 feet, gauging 183,000 feet before shot.

In Gilmer County, C & H Oil Co. completed No. 2 R. E. Garrett in Troy district in the Injun sand at 1,623 feet with 900,000 feet. In Glenville Independent, John M. Trexler drilled on the Dora A. Clayton farm through the Big Injun sand to 1,687 feet and it was dry.

In Lewis County, McCall Drilling Co. completed a test on the Lloyd G. Losh farm in Freemans Creek district in the Injun sand at 1,933 feet, gauging 252,000.

In Lincoln County, Guyan Gas Co. completed a test on the J. W. Jeffers farm in Sheridan district at 1,608 feet, with 680,000 feet at 1,548-57 feet. In Union district, Roy & McComas completed No. 2 Oscar Adkins at 3,605 feet, gauging 425,000 feet.

In Nicholas County, Hope Natural Gas Co. completed No. 7775 Federal Coal Co. lease in Jefferson district at 2,659 feet, a small gas well.

In Ritchie County, Creed Barker completed a test on the Lewis Barker farm in Murphy district in the Salt sand at 1,280 feet good for 1,000,000 feet. In Clay district, McBurney and others completed No. 4 M. B. Nutter in the Big Injun at 1,990 feet, a small gas well.

In Roane County, L. L. Reed and others drilled on the Marshall C. Bradley farm in Harper district through the Salt sand to 1,678 feet and it was dry. L. C. Young and others drilled on the T. P. Ryan and others lease through the Salt sand to 1,900 feet, also dry.

In Upshur County, Cumberland Allegheny Co. completed a test on the C. F. Lewis farm in Buckhannan district in the Benson sand at 4,059-78 feet, with 300,000 feet at 4,069 feet.

In Wayne County, Kentucky-West Virginia Gas Co. completed a test on the R. S. Sansom farm in Union district at 3,206 feet, gauging 425,000 feet at 2,595-3,120 feet.

Oriskany Gas Field

One interesting test west of the Coopers Creek pool in Kanawha County was completed by Godfrey L. Cabot, Inc., on the Sarah Ann Null farm 2¾ miles west of the gas well on the G. W. Facemyer property in Union district. The Corniferous lime was topped at 4,789 feet; Oriskany at 4,880; gauging before shot 320,000 feet a day at 4,881-89 feet; Lime Break, 4,916-27 feet; sand again at 4,927-33 feet; Sandy lime, 4,933-36 feet. It will be deepened to make certain of the Helderberh before shot.

There were several new locations. United Fuel Gas Co. has made locations on the C. C. Fisher farm 2,200 feet northwest of the J. E. and M. D. Good farm; on the C. T. Talley farm, 1,700 feet south of the Good farm on the H. A. Shirkey farm, 2,200 feet north 30 degrees west of the Good farm; on the Lizzie Sisson farm, 2,700 feet north of the Good farm; on the W. H. O'Dell farm, 1,800 feet northeast of the Elias M. Burdette farm, all in Poca district.

Columbian Carbon Co. made three locations. On the Patrick and Carte farm, 1,200 feet north of No. 1 H. C. Smith; on the W. B. Fogarty, 1,700 feet south of that location; on the Omer L. Burdette farm, 2,100 feet northwest of the Mollie Shaffer farm, United Carbon Co. made a location on the R. B. Baldwin farm, 3,000 feet southwest of the C. C. Fisher gas well, all in Poca district.

Outside Deep Tests

In Burning Springs district, Wirt County, Carnegie Natural Gas Co. straightened the hole on the W. C. Patterson farm and resumed drilling, reaching 4,810 feet. The Corniferous lime is extremely hard. This company's test on the W. O. Caplinger farm in Tucker district is drilling at 900 feet.

In Jackson County, United Carbon Co. is fishing at 3,560 feet in the No. 1 Elizabeth Ward Perkins in Washington district and drilling at 3,180 feet in No. 2.

In Burning Springs district, Wirt County, Godfrey L. Cabot, Inc., plugged the deep hole standing on the Walter Hoffman farm which had reached 5,370 feet. Tools and line were lost in the hole which was caving badly. The Onondaga had not been reached.

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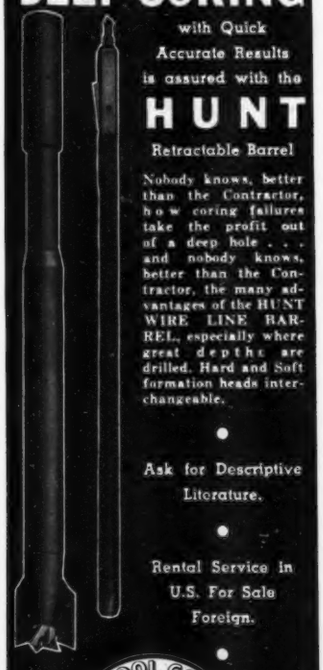

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Among Gulf Coast Drilling Contractors

Rowan Drilling Co., which opened the first production around the flank of the Venice Salt dome in Plaquemines Parish, Coastal Louisiana, for the Tide Water Oil Co., received contract for another test and a canal is being dredged to the location. One rig is being moved to the Cayuga field for the Stanolind and Texas Seaboard Oil Co. Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 1 Wright, 932 feet east of production in the Fairbanks field in Harris County, is being completed. At Amelia drilling continues for the Humble Oil & Refining Co. with two rigs. The company's No. 1 Jameson at the Danbury dome in Brazoria County is drilling below 4,000 feet.

George Echols has moved a second rig to the north extension area for Sinclair Prairie Oil Co. No. 1 Bennett, a south offset to production. His No. 1 Lander in the same field is drilling below 5,040 feet. In the Lodi area of the Rodessa field, and located in Marion County, Fohs Oil Co. test has been completed for an initial production of 25 bbls. per day. For the same company and located at Gillis, No. 19 Castle is being completed in the 7,000-foot horizon.

Rutherford Drilling Co. has completed Skelly Oil Co. No. 2 Johnson for an initial production of 353 bbls. per day through a quarter-inch choke. Contract has been received and the rig is being moved over for No. 14 Cobb. Special attention is attracted to this test as it is scheduled to be drilled to 11,000 feet. The 23 producers that have been completed in the field have been drilled by Rutherford and the present test is located in the heart of the field. In the meantime a rig has been moved to the McCampbell field in Aransas County, where a 9,000-foot test is scheduled to be drilled. Other operations are listed for the Buckeye field in Matagorda County where United North & South Development Co. No. 1 Lambert is drilling in shale below 7,997 feet and in the same county, but on a wildcat prospect, Royal Oil & Gas Corp. No. 1 T. J. Ewing is below 8,790 feet.

In the southeast extension area of the Segno field, Polk County, Jordan Drilling Co. is preparing to core deeper in Humble Oil & Refining Co. No. 6-B Kirby after it showed nothing but salt water in the expected pay horizon. This is the second dry hole drilled in the area, which apparently confines production to a small area. Contract has been received for a second test and the rig is being moved. Other contractors operating in this field are Schofield & Thompson and Thomson Drilling Co.

Glenn H. McCarthy was scheduled to make a production test on No. 1 Rohls, 1,400 feet southwest of the discovery well, after sand showing oil was reported to have been cored below 7,800 feet. No. 2-A Foley is coring in shale below 7,742 feet, No. 1 Palacios State Bank is below 7,330 feet, while Sun Oil Co. No. 1 Bay Shore farms is bottomed at 8,700 feet and reported that casing will be cemented preparatory to drilling deeper. McCarthy No. 1 Whitcomb, in the recently completed Friendswood field, is drilling below 3,700 feet, while another is located in the West Beaumont field.

Jack Frazier has completed No. 1 John Roberts for a distillate well. It was completed through perforated casing at 7,581-67 feet, and in 20 hours through a 12/64-inch bottom-hole choke it flowed 49 bbls. of clear distillate. The well is southwest of the discovery well of the Hardin field, Liberty County. In this same area contract is expected to be let for Shell Petroleum Corp. No. 1 Cessna, a northeast offset of the recently opened extension producer, following the completion of Woodley Petroleum Corp. No. 1 McMurtay, which is bottomed in sandy shale showing oil at 7,626 feet. Seven-inch casing was cemented at 7,575 feet. This well was dug by Harry L. Edwards who also reports activity in the Dickinson and Hastings fields for Stanolind Oil & Gas Co. and Coast Petroleum Co.

O. W. Dyer is preparing to complete two deep tests in the McCampbell field in Aransas County for the Atlantic Refining Co. No. 3-C McCampbell is bottomed at 7,171 feet with 5½-inch casing on bottom. In No. 1 Scrivner 5-inch casing has been cemented at 7,119 feet. Two other tests for the same company have been spudded. In the La Blanca field, Atlantic Refining Co. No. 1 Lewis is drilling below 8,280 feet, and in the Dickinson field for the same company No. 2 Lippman has been completed. Contract has been received for No. 3 Sealy Hutchings.

Allen & Morris of San Antonio are moving a heavy-duty diesel rotary rig to Maverick County in Southwest Texas for No. 1 Chittem for the Wellington Oil Co. It is in section 129, Block 7, and is scheduled to be drilled to the Glen Rose section or below 6,000 feet.

Oil operators, competing for leases on approximately 100,000 acres of submerged lands in the Gulf Coast area, submitted more than 200 bids. W. H. McDonald, land commissioner, said awards would be made in 30 days, after the land office had tabulated and studied the bids. Although much of the area was described as wildcat, Mr. McDonald said operators had made a close study of the 155 tracts offered.

They included seven tracts of 80 acres in Jefferson County; a 170-acre tract in the Ramon Musquez Survey in Calhoun, Victoria and Jackson

(Continued on Page 90)

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East and East Central Texas

THREE DISAPPOINTMENTS IN DEEP EASTERN TEXAS TESTS

By
L. E. BREDBERG

DALLAS, Tex., Aug. 2.—Three deep disappointments were registered by the East Texas district this week. One test thought certain to make a Glen Rose producer proved dry in that formation, and two Trinity tests were given up as failures.

The second Trinity test of Tide Water Associated Oil Co., Seaboard Oil Corp. and Humble Oil & Refining Co., on their jointly held block in the Opelika area in northeastern Henderson County, proved a "dud" when it was drilled into and through the Glen Rose and is now being deepened into the Lower Glen Rose. This test, No. 2 McElreath and Suggett, in the W. P. Wyche Survey, is drilling below 7,600 feet after it missed the Upper Glen Rose (Trinity pay member) which is producing in the three companies' No. 1 try for production in the area. The pay in the first well was picked up at 7,185 feet, the test drilled to 7,195 feet, but the well never was able to complete satisfactorily because of stuck drill stem which was cemented in the hole and used for production string. That well is producing around 9 bbls. per day, and is considered a "freak" well since the first one, a southeast offset, failed to pick up the same saturated streak.

When the original well started showing oil last April it caused an immediate "run" for leases and royalties, this campaign extending to cover the entire county and lapping over into other counties. Companies and independents took renewed interest in old domes and structures which previously had failed to pay off in the Woodbine sand when tested to that horizon, with the idea of sinking Trinity tests on them to test the lower formations. However, a number of Trinity tests drilled throughout the district during the past year have proven failures, which has lessened interest in deep drilling, and the failure of this second try, which looked impossible to make a failure, will dampen the ardor of wildcatters still more.

Elevation of the first test was 394 feet and of the second 451 feet.

Abandonments

The two other deep abandonments in the district were in Hunt and Rusk counties. Stanolind Oil & Gas Co. gave up one as a failure and Barnett Petroleum Corp. of Dallas is plugging the second. The former was on the Hawks land, in the R. Ragsdale Survey, NE Hunt County, on what was considered as one of the most likely looking faulted structures from a deep producing standpoint. It was drilled to 6,570 feet and a bad fishing job has caused untold trouble, the company deciding to abandon the test as it failed to make a producer in either the Paluxy or Upper Glen Rose. The derrick is being moved to a location on the T. Nores lands in the Thresher Survey, about 5 miles north of Kosse in Limestone County, for a Trinity test, which will also be located on the Mexia-Talco fault. It will be on a 7,000-acre block and is scheduled to go to 6,500 feet.

Barnett Petroleum Corp. No. 1 S. C. Sanford, in the W. A. Corder Survey, 10 miles east of Mount Enterprise, in southern Rusk County, has been abandoned at a total depth of 6,504 feet, after failing to make a Trinity producer. This is the second deep test to be abandoned in this area, Pure Oil Co. having given up one last year at a total depth of 7,799 feet. This test was on the Faulkner lands, in the W. Elliott Survey.

But regardless of these mentioned failures for the Mount Enterprise area, L. H. Riley has assembled some 5,000 acres and agreed to start a test around the first of September, two companies being mentioned as probably drilling the test which is to go to the basal Glen Rose or perhaps the Travis Peak. Part of the block includes the W. Elliott Survey, in which the Pure test was drilled.

Other Tests

Another Trinity test reported in the making is that of W. C. McGlothlin of Corsicana, who has assembled a block of 6,000 acres near Pittsburgh, in southern Titus County. It will probably be drilled to the basal Glen Rose.

A Woodbine sand test is reported for an area 5 miles west of Rusk in Cherokee County, location said to have been made in the D. A. Acker Survey, several companies being said to have furnished acreage and bottom-hole money to help finance the test.

Eight miles southeast of Mexia, in Limestone County, J. Johnson has staked location on the E. M. Speight lands, in the A. Valera Survey. It was not reported whether it would be only a Woodbine sand test or would be carried down in quest of Trinity production.

Hudnall & Nowlin of Dallas have not staked location for a test yet, but have been leasing in the area about 6 miles northeast of Corsicana, in northern Navarro County, near the Ellis County line, and are expected to drill a test on the block they are assembling in the Joseph Myer, Robertson County School Lands, Chalmer and adjacent surveys, in the vicinity of Tupilo.

Trinity Failure

The Trinity test of Roeser-Pendleton, Inc., on the Bowyer lands, in the E. Ritter Survey, on the west side of the Cayuga field in northwestern Anderson County, is another deep test failing to pay off for the district. It was drilled to 7,682 feet and produced some high gravity oil from the basal Glen Rose, the first of three Trinity tests to show for an oil producer in this section, the other two, drilled by Tide Water Associated and Seaboard Oil Corp., making only gas-distillate wells. But this third deep test failed to make a commercial producer, so is being plugged back to the Woodbine to complete in that upper and regular pay horizon. It topped Woodbine at 3,991 feet, and Georgetown lime at 4,749 feet. The deeper porous lime section, showing free oil, was logged from 7,603-58 feet, which was given a treatment of 10,000 gallons in an effort to increase the production.

Sulphur Bluff Field

The Sulphur Bluff field in northern Hopkins County, which is producing from the Paluxy sand, upper member of the Trinity, on a faulted structure, has its first pumping wells. F. D. Jones and others completed the first pumper on its Gulf-Basham lease, a southeast outpost, which made 105 bbls. on pump, and D. S. Hager and others, discoverers of the field, completed the other on the southern part of the discovery tract on the Worsham farm. It made 285 bbls. of fluid, 15 per cent salt water. Elevation is 438 feet and the Paluxy was logged from 4,509-65 feet.

Practically every well in the Talco field, another faulted Paluxy sand field, 18 miles northeast, in northeastern Franklin and northwestern Titus counties, is pumping, whereas until these two wells were completed in the Sulphur Bluff field, every one has been a flowing well. Gravity of the oil in the two fields is about the same, averaging around 20-21 degrees although some is much lower in gravity in the Talco field.

MISCELLANEOUS COMPLETIONS

Anderson County

Tide Water and others No. 4 Lutterloh, 4,018 feet, 73 bbls. through one-eighth inch choke.

Falls County

A. H. Bell and others No. 1 A. Garrett, total depth 1,256 feet, 25 bbls. per day through casing, 2 miles northeast of Lott, elevation 510 feet.

Franklin County

Byrd-Frost, Inc. No. 1 Evans, 4,121-4,270 feet, 520 bbls. in 12 hours; No. 10 Phillips, 4,292 feet, 330 bbls. per day. Grey & Wolfe No. 1 Mrs. H. Bolin, 4,235-4,324 feet, 248 bbls. per day. Stroube & Stroube No. 2 Prince, 4,276 feet, 599 bbls. per day agitating.

Hopkins County

Gholson and others No. 14 Smith, 4,483-4,515 feet, 45 bbls. per hour. Hager and others No. 9 Worsham, 4,565 feet, 15 bbls. per hour.

Titus County

Byars and others No. 1-C Edwards, 4,290-4,312 feet, 550 bbls. in 36 hours. Cliff Camp and others No. 1 First National Bank, 4,280 feet, 183 bbls. Hinton and others No. 10 Wilson, 4,280 feet, 578 bbls. Humble Oil & Refining Co. No. 33 King, 4,308 feet, 130 bbls. Lucey Petroleum Co. No. 1 Williams, 4,218-89 feet, 15 bbls. per hour. Magnolia Petroleum Co. No. 10 Mainard, 4,305 feet, 165 bbls. R. E. Moore, Jr. No. 1-B J. A. Moore, 4,260-4,320 feet, 244 bbls. Smith and others No. 1 Clear, 4,158-4,283 feet, 2 bbls. per hour on swab. Tide Water Associated No. 5 Wilson, 4,284 feet, 389 bbls. Tysco Oil & Refining Co. No. 3 Edwards, 4,286 feet, 196 bbls.

EAST TEXAS FIELD

Gregg County

Arkansas Fuel Oil Co. No. 1 Cemetery, 3,572-97 feet, 23 bbls. in 15 minutes. Atlantic Refining Co. No. 19 Pritchard, 3,496-3,649 feet, 98 bbls. per hour. Atlantic and Sun Oil Co. No. 8-B Barnswell, 3,455-3,510 feet, 129 bbls. per hour. Atlantic and Wadley No. 14 Bander, 3,565-3,785 feet, 65 bbls. per hour. R. Bampas No. 3 Snoddy, 3,568-3,578 feet, 20 bbls. in 15 minutes. Empire Oil & Refining Co. No. 13 Rogers, 3,583-3,680 feet, 17 bbls. in 15 minutes. Gulf Refining Co. No. 49 Shepperd, 3,479-90 feet, 29 bbls. per hour. Hester & Graham No. 5 Branson, 3,550-57 feet, 40 bbls. per hour. Magnolia Petroleum Co. No. 10 Key, 3,353-45 feet, 120 bbls. per hour. Stanolind and Atlantic No. 16 Hayes, 3,513-68 feet, 67 bbls. per hour. Sun and Atlantic No. 16 Thomas, 3,451-3,507 feet, 32 bbls. in 30 minutes. Tide Water Associated No. 15 Jones, 3,638-55 feet, 9 bbls. in 10 minutes. Atlantic and others No. 16-A Hughey, junked and abandoned 2,310 feet. H. H. Terte No. 4 McNeely, 3,633-34 feet, 90 bbls. in two hours. Empire Oil & Refining Co. No. 9 Muckelroy, 3,551-89 feet, 11 bbls. in 15 minutes. Hunter & Rowe No. 12 Still, dry and abandoned 3,489 feet. J. J. Jenkins No. 2 Dickson, 3,520-35 feet, 30 bbls. in two hours on pump. Magnolia Petroleum Co. No. 8 Still, dry and abandoned. Paul L. Miller No. 3-A Crim, 3,535-3,610 feet, 257 bbls. in three hours. Rancho Oil Co. No. 3 Crim, 3,539-76 feet, 62 bbls. per hour. Shell Petroleum Corp. No. 15 Willoughby, 3,538-3,601 feet, 35 bbls. in 30 minutes. A. N. Snyder No. 1 Church Lot, 3,746-47 feet, 20 bbls. per hour on swab. Texas Co. No. 32 Elder, 3,664-72 feet, 23 bbls. in 20 minutes. Tide Water Associated No. 12-B Bean, 3,558-3,627 feet, 50 bbls. per hour.

Rusk County

Gulf Oil Corp. No. 21 Sexton, 3,660-95 feet, 10 bbls. per hour. Humble Oil & Refining Co. No. 12-C Sexton, 3,704-3,803 feet, 90 bbls. per hour; No. 13-C Sexton, 3,719-99 feet, 95 bbls. per hour. Magnolia Petroleum Co. No. 17 Wells, 3,651-3,710 feet, 20 bbls. in 30 minutes. British American Oil Co. No. 14 Kangerga Brothers, 3,614-17 feet, 38 bbls. in 30 minutes; No. 13 Stone, 3,622-32 feet, 20 bbls. per hour. Davis & Hart No. 4-A Perry, 3,655-70 feet, 18 bbls. in 45 minutes. F. W. Fisher No. 20-B Eaton, 3,741-57 feet, 180 bbls. in two hours; No. 18-B Eaton, 3,705-25 feet, 140 bbls. in two hours. G. B. R. Oil Co. No. 16 Harmon, 3,737-52 feet, 80 bbls. per hour. Genecov & Roosth No. 3 Hammett,

(Continued on Page 88)

California Field Report

By
L. P. STOCKMAN

DECREASE IN PRODUCTION IS THE COMMITTEE'S PROGRAM

LOS ANGELES, Calif., Aug. 2.—The recommendation of the Bureau of Mines was adopted by the Central Committee of California Oil Producers, which placed the California oil allotment for August at 612,800 bbls. per day. The July allowable was 603,900 bbls., 8,900 below that for August. In adopting the new allowable, the Central Committee stipulated that it did so with the explicit understanding that daily production would not exceed that figure. Crude oil production has been averaging approximately 50,000 bbls. per day in excess of the established quota and thus Umpire Pemberton will be confronted with a difficult task in effecting the necessary reduction. The daily quota probably will be gradually decreased to equalize supply and demand during the winter, when consumption is smaller.

Exploration work in wildcat areas and drilling in proven fields continued at a high rate during July. Drilling operations in the Wilmington field are expected to show a substantial increase, reflecting the recent lifting of drilling restrictions in the Long Beach section of the field. The Santa Maria Valley area of Santa Barbara County continues active and a further increase in exploration and exploitation appears inevitable in view of the extensive leasing in that district since completion of two discovery wells by Union Oil Co. Extension of the productive limits of the El Segundo field of Los Angeles Basin has already resulted in three new projects and several additional wells will be started soon. San Joaquin Valley fields probably will continue active during the remainder of the year and, although operators are keeping their fingers crossed, a development campaign may start in the Kettleman North Dome field, where Kenda recently proved existence of commercial production in rocks of Eocene age.

Wilmington

Development in the Wilmington field is showing a decided trend to the east, and within a short time the Long Beach section of the field will be undergoing aggressive development. Operators have staked locations and will soon proceed with drilling. Drilling sites in the Long Beach section are commanding top prices and those in certain locations are bringing a $5,000 cash bonus with royalties averaging between 20 and 30 per cent. Production may extend beyond the Los Angeles Flood Control Channel, beyond which drilling restrictions are still in force. Structural conditions are still unknown.

During the week operators in the Wilmington field completed eight wells, which showed a wide range in initial daily production. Initial daily production of new wells has shown a declining tendency and the number of pumpers is increasing. This is due partly to the location of completions with respect to structure. Union Pacific Railroad Co. completed No. 28 Wilmington flowing 640 bbls. of 21.3-gravity oil daily from 3,577 feet after cementing through perforations at 3,148 feet. This well is flowing from the Ranger zone around the outside of the tubing and from the Terminal zone inside the tubing simultaneously. It is the first multiple completion in the Wilmington field and production during the next few weeks will be watched carefully. Pacific Western Oil Co. completed No. 1 Ronan Community flowing 121 bbls. of 14.7-gravity oil daily and No. 3 Patten flowing 191 bbls. per day of 14.4-gravity oil. The former was bottomed at 2,955 feet and finished with 467 feet of 8⅝-inch liner, including 429 feet of perforated. The latter was bottomed at 2,930 feet and brought in flowing through a 29/64-inch bean.

Bankline Oil Co. No. 26 D.H.C. has been completed flowing 631 bbls. of 21.7-gravity oil daily through a 23/64-inch bean. This new well was bottomed at 3,458 feet and finished with 446 feet of 6⅝-inch liner, including 442 feet of 80-mesh screen. A. T. Jergins Trust completed its fourth producer in the Wilmington field early in the week when No. 6 Wilmington was brought in pumping 144 bbls. of 17.8-gravity oil daily from 3,502 feet. V. R. G. Wilbur No. 3 Mutual has been completed pumping 81 bbls. of 16.9-gravity oil daily from 3,579 feet, and Packard Petroleum Corp. No. 20-8-2 has been completed pumping 215 bbls. of 14.6-gravity oil daily from 3,000 feet. The latter's new well was finished with 468 feet of 8⅝-inch liner including 381 feet of perforated. F. C. Hall, Inc., has completed No. 1 Barcus pumping 118 bbls. of 17.2-gravity oil per day from 3,470 feet. General Petroleum Corp., A. T. Jergins Trust, Royalty Service Corp. and Union Pacific Railroad Co. have plans for additional drilling in the Wilmington field and new rigs are expected to be erected soon. Bankline Oil Co., which has locations available in the Long Beach section of the Wilmington field, will also undertake additional development.

El Segundo

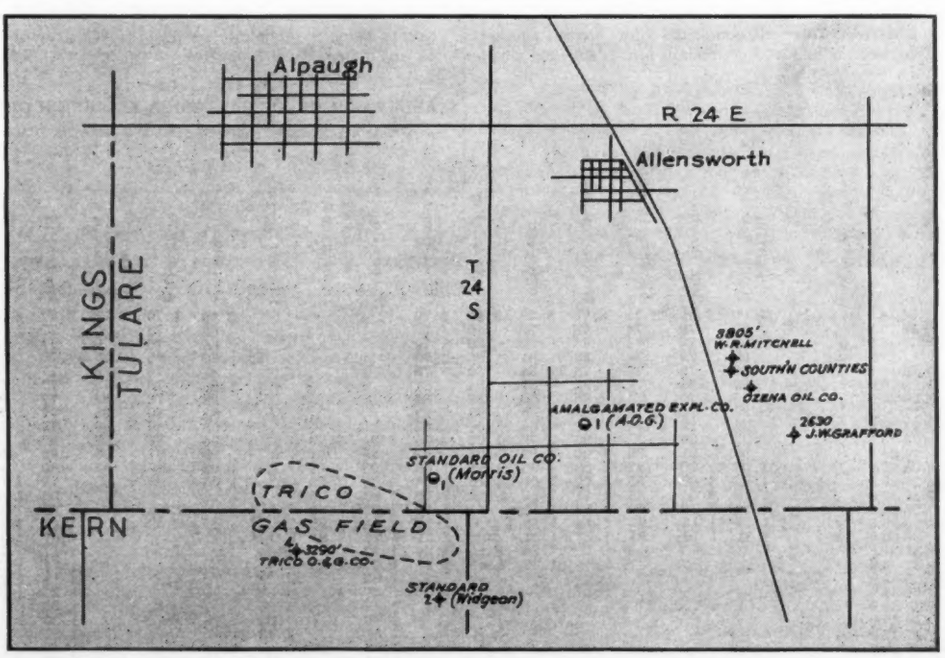
Completion of excellent wells recently by Standard Oil Co., Richfield Oil Corp. and Ohio Oil Co. in the northwestern end of the El Segundo field, has stimulated interest in the production possibilities of the northwest extension. Standard No. 1 Refinery was completed flowing 2,127 bbls. daily and Richfield Oil Corp. No. 1 Elsie flowing 3,120 bbls. daily, while Nos. 4 and 5 Gough of Ohio Oil Co. were brought in flowing 550 bbls. and 1,540 bbls. per day respectively. This group of wells is primarily responsible for most of the new work getting under way in the extreme northwestern end of the El Segundo field. Standard Oil Co. is rigging up No. 2 Refinery and has staked location for No. 3, which will be located west of No. 1 Refinery. Richfield Oil Corp., following its successful completion of No. 1 Elsie, has staked location for No. 2 on the same lease and will have rig material on the ground within a few days. On the Gough lease, where two good wells recently were completed, Ohio Oil Co. is rigging up rotary drilling equipment preparatory to spudding in No. 6. Still further northwest, George F. Getty, Inc., is rigging up rotary drilling equipment on No. 1 El Segundo, Pacific Western Oil Co. is completing derrick for No. 1 Goodwin, and Ramsey & Wallace have completed preparations to spud in their initial test. Union Oil Co., which has completed two small wells in the extreme southern end of the field, is building rig for No. 3 El Segundo in the extreme western end of the field. Tide Water Associated Oil Co. will begin drilling operations soon on its initial test on the Leuzinger property in the extreme eastern end of the El Segundo field, north of the Texas Co.'s Johnson lease, on which one small well has been completed.

Greeley

In the Greeley field of Kern County, Standard Oil Co. has completed No. 11-6 Kern County Land, in section 17-29-26, flowing 2,035 bbls. of 36.5-gravity oil and 10,580,000 feet of gas per day. This new well was bottomed at 7,815 feet and finished with 155 feet of 6⅝-inch liner including 110 feet of perforated. Completion of No. 11-6 Kern County Land is of particular interest because it is the most northerly well in the Greeley field and because No. 11-4 Kern County Land, completed last week, is the most southerly completion in the main part of the field. No. 11-4 Kern County Land is in section 20-29-26 and No. 11-6 Kern County Land is in section 17-29-26. In section 18-29-26, on which no wells have been completed, Standard will soon drill No. 11-8 Kern County Land 990 feet north and 1,650 feet west of the SE cor. of the section.

Kettleman North Dome

Kettleman North Dome Association, which recently proved up the existence of substantial production in rocks of Eocene age underlying the present productive Temblor in the Kettleman North Dome field, has killed its deep zone discovery well and will drill ahead in order to determine the approximate thickness of the Eocene oil sand. This well, No. 4-18-J, located in the extreme western end of the Kettleman structure in section 18-21-17, is producing from approximately 33 feet of oil sand. The company is drilling up the aluminum liner with which the hole was finished. The company is not



Standard Oil Co. and Amalgamated Exploration Co. have each started new wildcats in Tulare County east of the Delano (Trico) gas field

sure just how much oil sand is open to the well, as the aluminum liner stuck 20 feet off bottom. The last 24-hour gauge before the well was killed showed 1,172 bbls. of 45.9-gravity oil cutting 7 per cent fresh water and 20,600,000 feet of gas. Due to the location of Kenda's deep zone discovery on the structure, it is assumed that this Eocene oil zone underlies the greater part of the present productive limits of the field. No. 4-18-J is far beyond the original blue line drawn during formation of the Kettleman North Dome Association to enclose what was considered potentially productive acreage. This deep well failed to log enough oil sand in the Temblor to justify the expectation of developing commercial production and the discovery of productive sand in the Eocene tends to indicate that the deep zone may be even larger in areal extent than the present productive Temblor. Section 29-21-17, where Standard Oil Co. holds fee title to 320 acres and Union Oil Co. and Superior Oil Co. hold leases on the remainder, is believed to be approximately 500 feet higher structurally than section 18-21-17, on which the deep zone discovery was made.

Ventura Avenue

Shell Oil Co. completed an excellent well in the Ventura Avenue field a few days ago when No. 91 Taylor, in the extreme western end of the structure, was brought in flowing 2,958 bbls. of 28.1-gravity oil and 1,710,000 feet of gas per day from 8,717 feet. The well was cemented through perforations at 7,881 feet and was brought in flowing through open line. It is showing 270 pounds on the tubing and 1,490 pounds on the casing. This is one of the best completions chalked up in this field for several months and tends to indicate the probability that Continental Oil Co.'s wells in the eastern end of the Grubb lease in the San Miguelito field are at the extreme western end of the Ventura Avenue structure. The gap between Continental's group of wells and Shell Oil Co.'s westerly producers on the Taylor lease is gradually becoming smaller.

In the Rincon field of Ventura County, Chanslor Canfield Midway Oil Co. completed No. 16-B Hobson flowing 1,250 bbls. of 29.2-gravity oil and 1,413,000 feet of gas per day from 4,400 feet with the 9-inch water shutoff effected at 3,895 feet. This new producer was brought in flowing through a 46/64-inch bean. In addition to completing this well the Chansler Canfield Midway Oil Co. is putting the finishing touches on No. 15-B Hobson and should have this potential producer tanking oil within another week. A new rig has been erected for No. 16-B Hobson and road is being built to the location selected for No. 17-B Hobson. This successful work has resulted in Richfield Oil Corp. going back into No. 2 U. S. Hobson and drilling some additional hole. The Rincon Petroleum Co. has also resumed drilling in No. 3 Shudde, a tideland project which has been producing a small amount of oil per day from 2,109 feet.

In the Gato Ridge field of Santa Barbara County Barnsdall Oil Co. has completed No. 8 Tognazzine doing 140 bbls. of 14.1-gravity oil per day on the beam from 2,625 feet. This well, completed a few months ago without the making of a production test, is showing smaller production than the average for the area and gas will be injected as an aid.

Rosecrans

The Rosecrans field, where Barnsdall Oil Co. proved up deep production in the O'Dea zone several months ago, is showing a consistent increase in drilling and further gain is assured. During the past week, Union Oil Co. began rig construction for No. 17 Rosecrans and is grading for No. 35 Howard Park. Universal Consolidated Oil Co. No. 1 Trust, a deep test, failed to show substantial production upon completion in the O'Dea zone and the company is making preparations to open up some more oil sand by perforating the casing higher up in the hole. This well was brought in flowing 390 bbls. of 33.8-gravity oil per day by heads from 7,559 feet after the hole had been plugged back from 7,588 feet. The property on which this well was completed was originally held by Union Oil Co. but was quitclaimed and then leased by Barnsdall Oil Co., which drilled two deep wells. Barnsdall subsequently quitclaimed all but a small part of the lease and then Republic Petroleum Co. stepped in and leased the remaining acreage and drilled a small pumper. Republic Petroleum subsequently quitclaimed all but five acres and then Universal Consolidated leased the remaining acreage and started its well. It remains to be seen whether Universal Consolidated will undertake additional development.

Los Angeles Basin

In the Long Beach field, Shell Oil Co. has completed No. 14 Cresson pumping 104 bbls. of 22.8-gravity oil cutting 7 per cent per day from 3,380 feet. In the Seal Beach field, Tide Water Associated Oil Co. completed No. 16 Bryant flowing 138 bbls. of 27.4-gravity oil per day on a compressor from 6,510 feet. Continental Oil Co. is grading location for a rig to be used in the drilling of No. 40 Bixby and the bit is expected to get under way within the next fortnight. Drilling operations around the edge of the East Coyote field by various operators has focussed the attention of those holding productive acreage on deep-zone possibilities with the result that Tide Water Associated Oil Co. is rigging up No. 42 Anaheim at 3,595 feet preparatory to redrilling and deepening operations. Union Oil Co. has staked location for No. 21 Hole. In the West Coyote field, Standard Oil Co. has staked location for No. 127 Murphy Coyote. In the Dominguez field Union Oil Co. has gone back into No. 50 Callender and will undertake some necessary remedial work as the new zone tested failed to yield large or favorable production.

Elk Hills

Richfield Oil Corp. completed another good well in the Elk Hills field of the San Joaquin Basin when No. 13-D Crampton was brought in pumping 238 bbls. of 21.1-gravity oil per day from 3,334 feet. This sand is rather well depleted, but a 200-bbl. well from 3,300 feet is considered a commercial producer under present conditions, especially when the production cuts under 3 per cent. Richfield did not do any drilling in this field during the several years of receivership due to lack of sufficient cash, but now that the company has been rejuvenated the field and geological department is able to proceed with normal development. Aggressive drill-

(Continued on Page 88)

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	July 22		July 15			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	176,726	151,541
Gasoline	341,430	48,776	50,780	7,254	2,299,122	3,730,163
Kerosene	5,390	770	.....	.....	256,032	888,702
Foreign exports:						
Crude oil	305,261	43,609	329,948	47,135	7,654,604	5,092,409
Fuel oil	292,585	41,798	226,742	32,392	8,330,842	5,877,546
Diesel and gas oil	220,369	31,481	12,684	1,812	4,167,058	3,355,443
Gasoline	337,199	48,171	117,912	16,845	4,399,339	4,146,373
Kerosene	52,253	7,465	92,058	13,151	1,254,178	875,528
Other unfinished oil	.....	.....	200,704	28,672	777,652	112,788
Coastwise-domestic:						
Crude oil	197,499	28,214	220,058	31,437	2,138,908	3,769,327
Fuel oil	234,297	33,471	299,657	42,808	8,300,768	5,190,981
Diesel and gas oil	23,803	3,400	55,819	7,974	1,207,043	762,288
Gasoline	537,898	76,843	236,295	33,756	8,307,391	7,126,084
Kerosene	52,489	7,498	35,781	5,112	241,886	128,225

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	152,932	.....
Gasoline	.....	.....	.....	.....	25,778	227,419
Asphalt	.....	.....	.....	.....	205,319	138,097
Lubricants	.....	.....	.....	.....	12,857	31,725
Foreign exports:						
Crude oil	149,247	21,321	.....	.....	1,687,329	1,841,688
Fuel oil	80,019	11,431	18,976	2,711	1,206,330	1,580,951
Diesel and gas oil	69,514	9,931	87,167	12,452	1,708,657	920,258
Gasoline	64,617	9,231	92,907	13,272	2,887,180	2,178,244
Kerosene	.....	.....	25,722	3,675	497,267	437,871
Lubricants	18,473	2,639	.....	.....	325,615	203,169
Coast-wise-domestic:						
Fuel oil	38,196	5,457	185,398	26,485	3,608,556	3,882,282
Diesel and gas oil	35,137	5,020	33,577	4,797	567,823	406,960
Gasoline	101,625	14,518	151,103	21,586	2,619,107	2,859,356
Kerosene	.....	.....	19,842	2,835	123,056	102,798

STANDARD OIL CO. OF CALIFORNIA AND UNION OIL CO.

Crude oil prices at the well effective June 22, 1936

Gravity—	Signal Hill (Long Beach)	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda-Brea Canyon	Athens-Rosecrans	Dominguez	Elwood Terrace	Torrance	Richfield	Whittier E. Coyote (La Habra)	Montebello	W. Coyote Hills	Santa Fe Springs	Mountain View	Elk Hills Buena Vista Hills Midway-Sunset Lakeview Area	Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills	Santa Paula*	Orcutt*
14-14.9	$.80	$.79	$.74	$.78	$.79	$.80	$.76	....	....	....	$.80	$.76	$.76	$.77	$.78	....	....	$.70	$.70	$.70	....	....	$.70	....
15-15.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	....
16-16.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	$.70
17-17.9	.80	.79	.74	.78	.81	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.71	.70
18-18.9	.80	.79	.74	.78	.84	.80	.78	....	....	....	.82	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.73	.72
19-19.9	.82	.79	.74	.82	.87	.84	.81	....	....	....	.85	.76	.78	.77	.78	....	$.70	.74	.74	.71	$.70	....	.75	.74
20-20.9	.85	.79	.74	.85	.90	.88	.84	....	....	....	.88	.78	.82	.77	.80	....	.70	.78	.78	.72	.70	....	.77	.77
21-21.9	.88	.79	.74	.89	.93	.93	.88	....	....	....	.91	.80	.85	.77	.84	$.78	.73	.82	.82	.74	.70	....	.79	.80
22-22.9	.92	.82	.74	.92	.96	.98	.92	....	....	....	.93	.84	.89	.79	.88	.78	.77	.87	.86	.78	.72	....	.82	.83
23-23.9	.95	.86	.77	.96	.99	1.02	.96	$.84	$.79	....	.96	.88	.93	.82	.92	.78	.80	.92	.90	.82	.76	....	.85	.86
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	....	.99	.91	.96	.85	.96	.82	.84	.97	.94	.86	.79	....	.87	.88
25-25.9	1.03	.95	.82	1.03	1.05	1.11	1.03	.93	.83	....	1.02	.95	....	.89	.99	.86	.88	1.01	.98	.90	.83	....	.90	.91
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.86	....	1.05	.98	....	.92	1.03	.90	.91	1.06	1.02	....	....	....	.92	.93
27-27.9	1.10	1.05	.88	1.11	1.12	....	1.10	1.03	.88	....	....	1.02	....	.96	1.06	.95	.95	1.10	1.06	....	....	....	.95	....
28-28.9	1.14	1.10	.90	1.14	1.15	....	1.14	1.07	.90	....	....	1.06	....	.99	1.10	.99	.99	1.15	1.10	....	....	....	.97	....
29-29.9	1.17	1.15	.93	1.18	1.18	F.O.B.	1.17	1.12	.93	....	....	1.09	....	1.03	1.14	1.03	1.02	1.20	1.14	....	....	....	.99	....
30-30.9	1.21	1.19	.95	1.22	1.21	our	1.21	1.17	.95	F.O.B.	....	....	....	1.07	1.17	1.08	1.06	1.25	1.18	....	....	....	1.01	....
31-31.9	....	....	....	....	1.24	Pipe	1.24	1.22	.97	Ship	....	....	....	1.11	1.21	1.12	1.09	1.29	....	....	....	....	....	....
32-32.9	....	....	....	....	1.27	Line	1.27	1.27	1.00	....	....	....	....	1.14	1.25	1.16	1.13	1.34	....	....	....	....	....	....
33-33.9	....	....	....	....	....	....	....	1.32	....	$1.28	....	....	....	1.18	1.28	1.20	1.17	1.38	....	....	....	$1.19	....	....
34-34.9	....	....	....	....	....	....	....	1.37	....	1.32	....	....	....	1.22	1.32	1.25	1.20	....	....	....	....	1.23	....	....
35-35.9	....	....	....	....	....	....	....	1.42	....	1.35	....	....	....	1.25	....	1.29	....	....	....	....	....	1.27	....	....
36-36.9	....	....	....	....	....	....	....	1.46	....	1.39	....	....	....	1.29	....	1.33	....	....	....	....	....	1.31	....	....
37-37.9	....	....	....	....	....	....	....	1.51	....	1.43	....	....	....	1.32	....	1.37	....	....	....	....	....	1.35	....	....
38-38.9	....	....	....	....	....	....	....	1.56	....	....	....	....	....	1.36	....	1.42	....	....	....	....	....	1.39	....	....
39-39.9	....	....	....	....	....	....	....	1.61	....	....	....	....	....	1.40	....	....	....	....	....	....	....	1.43	....	....
40-40.9	....	....	....	....	....	....	....	1.66	....	....	....	....	....	1.43	....	....	....	....	....	....	....	....	....	....

Newhall, McKittrick, Kern River, Kern Front and Round Mountain, 70 cents for all grades. *Posted by Union Oil Co. Same company's Brea Canyon schedule stops at $1.14 for 28 degrees and over, and Belridge and Lost Hills schedule stops at $1.32 for 37 degrees and over.

Kansas Developments

By
DAL DALRYMPLE

PRATT COUNTY WILDCAT HAS OIL IN HOLE FROM SIMPSON

A probable oil strike in Pratt County, a possible extension of the Ellinwood pool of Barton County, completion of a six-year-old gas well in the Otis area, Rush County, as a large oil well, and completion of two pool openers were features of the week in Kansas fields.

Atlantic Refining Co., Skelly Oil Co. and Empire Oil & Refining Co. No. 1 Runyon, SW NW NE section 11-27-13w, Pratt County wildcat, had 1,500 feet of oil in the hole at 4,310 feet in Simpson formation. It was reported slopping over as the crew underreamed. Simpson was topped at 4,280 feet, and first show of oil was reported at 4,286 feet. Operators were expected to test after underreaming.

Helmerich & Payne and others No. 1 Sessler, SW SW SE section 29-20-1w, may prove an extension of the Ellinwood pool, Barton County. It is 2 miles southwest of production at Ellinwood. Lime was topped at 3,381 feet and oil saturation was found in cores at 3,405-06 feet and 3,410-12 feet. Standard tools are being rigged up

Kansas allowable production for August was set at 200,500 bbls. daily by the Corporation Commission. This was the allowable recommended by the Bureau of Mines.

Daily average production in Kansas the past week was 207,125 bbls., a new high record for the state.

Estimated Daily Production

Estimated daily production of Kansas for the week ending July 31, and for the preceding week, was as follows:

	Barrels	
	July 31	July 24
Oxford City	1,725	1,700
Burrton	14,375	13,900
Ritz-Canton	5,725	5,700
Graber	3,450	3,300
Hollow-Nikkel	2,950	2,975
Lerado	2,250	2,450
Voshell	2,475	2,450
Wellington	3,300	3,300
Ellsworth County:		
Lorraine	4,675	4,825
Other pools	1,710	1,700
Rice-Barton counties:		
Bloomer	6,100	5,875
Chase	8,025	8,650
Geneseo	2,600	2,375
Raymond	1,750	1,925
Silica	22,175	22,625
Keesling	925	1,250
Hauschild	1,250	1,125
Miscellaneous Rice	12,080	11,490
Miscellaneous Barton	5,455	6,380
Russell County:		
Fairport	1,960	1,340
Gorham	2,120	2,125
Russell	2,345	2,285
Sullivan	9,165	8,635
Trapp	11,935	11,040
Miscellaneous Russell	7,815	6,905
Sedgwick County:		
Valley Center	1,100	1,075
Miscellaneous	2,840	2,945
Ellis County:		
Bemis	4,250	3,900
Miscellaneous	3,180	3,840
Kingman County	675	570
Stafford County	3,555	3,360
Greenwood County	10,000	9,575
Butler County	15,850	15,950
Other fields	27,330	26,910
Total Kansas	207,125	204,450

Wildcat Completions

Ten wildcat completions in Kansas included two oil wells.

Stanolind Oil & Gas Co. No. 1 Schartz, NW cor. section 33-19-11w, opener of a new pool near the town of Ellinwood, Barton County, was completed at 3,349 feet, total depth. After shooting and acidizing, it pumped 541 bbls. of oil and 326 bbls. of water in 24 hours. Top of Kansas City lime was 3,075 feet, Conglomerate 3,323 feet, Siliceous lime 3,328 feet. This wildcat is west of the Silica field and north of the Ellinwood pool.

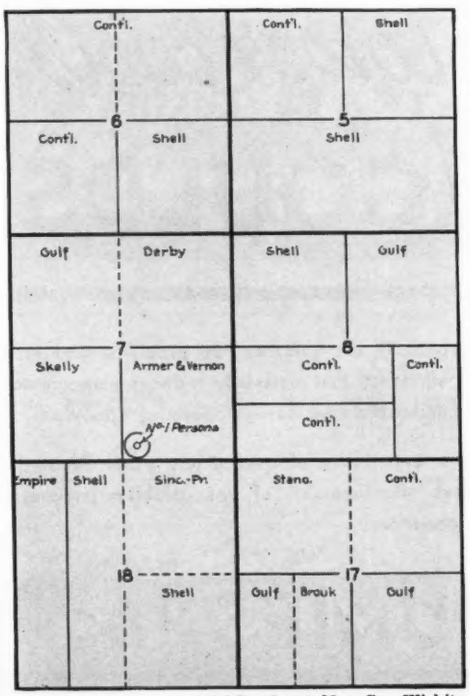
Fred Phillips and associates No. 1 Hubenett, SW NW SW section 23-20-6w, topped Kansas City lime at 2,775 feet, Chat 3,334 feet, total depth 3,366 feet, and pumped 207 bbls. of oil in 13 hours. It was acidized and pumped 252 bbls. of oil in 24 hours. It opened a new producing area in Rice County, north of the old Welch pool.

J. J. Muth No. 1 Penney, C N half NE SE section 29-14-18w, Ellis County wildcat, was reported abandoned at 315 feet.

Turner and others No. 1 Rogers, SW NE SW section 3-15-23w, Trego County, had Siliceous lime at 4,550 feet, was bottomed at 4,638 feet, and was dry and abandoned.

In Rush County, S. A. Murphy and others No. 1 Roth, NW NW SW section 21-16-18w, was estimated good for from 5,000,000 to 6,000,000 feet of gas in La-Motte sand at 3,580 feet, but found no oil and was dry and abandoned at 3,608 feet, total depth.

Bell Oil & Gas Co. and others No. 1 Austin, SE NE



Mid-Continent Map Co., Wichita

M. B. Armer and Vernon Oil & Gas Co. will drill a wildcat in section 7-17-13w, southwest of Ainsworth pool in Barton County, Kansas

NE section 28-23-1e, Harvey County, had Siliceous lime at 3,603-45 feet, total depth, and was dry and abandoned. No shows of oil were reported.

E. H. Moore, Inc., and others No. 1 Naughter, SW SW NW section 29-29-1e, Sedgwick County, topped Simpson formation at 3,780 feet, had Siliceous lime at 3,828-44 feet, total depth, and was dry and abandoned.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 1 Pyle, Jr., C NW NE section 8-29-16w, Kiowa County, was dry and abandoned in Siliceous lime at 5,050-75 feet, total depth.

In Elk County, Morgan and others No. 1 Cook, NW cor. section 29-30-12, topped Siliceous lime at 1,947 feet, had a hole full of water at 1,998-2,001 feet, total depth, and was dry and abandoned.

In Cowley County, E. Wakefield No. 1 Powers, NW SW NW section 8-32-6, was dry and abandoned in Mississippi lime at 3,157-60 feet, total depth.

W. I. Southern, Inc., No. 6 Sellens heirs B, NW SE NW section 30-15-13w, Trapp district, Russell County, topped Siliceous lime at 3,300 feet, total depth 3,303 feet, was acidized, pumped 1,424 bbls. of oil in 12 hours, making potential of 2,846 bbls.

Phillips Petroleum Co. No. 13 Hoffman, SW SW SE section 31-15-13w, had Siliceous lime at 3,313 feet, total depth 3,329 feet, swabbed 174 bbls. of oil in three hours, was acidized, pumped 1,550 bbls. in 12 hours and made potential of 3,100 bbls.

Empire Oil & Refining Co. No. 8 Sellens, NW NW SW section 30-15-13w, was acidized after finding Siliceous lime at 3,294-97 feet, total depth, pumped 577 bbls. of oil in eight hours, cutting 2 per cent water, and made potential of 1,792 bbls. Same company's No. 4 Boomhower, SW SE NW section 25-15-14w, was acidized and pumped 883 bbls. of oil in 12 hours, making potential of 1,766 bbls., from Siliceous lime at 3,314-15 feet, total depth.

Coralena Oil Co. No. 3 Deines, SE NE NE section 36-15-14w, topped Siliceous lime at 3,268 feet, was bottomed at 3,271 feet, pumped 1,316 bbls. of oil in 12 hours and made potential of 2,632 bbls. Same company's No. 2 George Sellens, SE SE SW section 20-15-13w, had Siliceous lime at 3,306-09 feet, total depth, pumped 1,135 bbls. of oil in 12 hours and made potential of 2,270 bbls.

Darby Petroleum Corp. No. 3 Michaelis, NW NE SE section 36-15-14w, had Siliceous lime at 3,315-17 feet, total depth, was acidized, pumped 913 bbls. of oil in 12 hours and made potential of 1,826 bbls.

National Refining Co. No. 3 N. Reinhardt C, NE NW SE section 25-14-15w, had Gorham sand at 3,174-82 feet, total depth, plugged back to 3,179 feet and pumped 1,089 bbls. of oil in 21½ hours.

Central Petroleum Co. No. 1 Deckert B, NE SE NW section 30-12-15w, found Kansas City lime at 3,038 feet, total depth 3,105 feet, was treated with acid and pumped 474 bbls. of oil in 24 hours.

Gulf Oil Corp. No. 3 Mollie, SE NE SE section 25-15-14w, had Siliceous lime at 3,301 feet, total depth 3,307 feet, was acidized, pumped 945 bbls. of oil in 12 hours and made potential of 1,890 bbls.

New work in Russell County: Gulf Oil Corp. No. 5 Mollie, NW NE SE section 25-14-14w, rig; same company's No. 10 Michaelis, SW SE SW section 32-15-13w, rig; Empire Oil & Refining Co. No. 7 Boomhower, NE SE SE section 25-15-14w, moving in; Coralena Oil Co. No. 2 Sellens heirs B, SE NW NW section 30-15-13w, rig; Carter Oil Co. No. 6 Detrick, SW SW SE section 8-15-13w, rigging up rotary; same company's No. 1 Detrick, SE cor. section 8-15-13w, an old well, cleaning out; National Refining Co. No. 3 Reinhardt C, NE SE SE section 25-14-15w, cellar; Alva Billings No. 3 Herbel A, NE SE NW section 35-14-14w, cellar; Ohio Oil Co. No. 1 Boxberger, SE SE NE section 21-14-14w, location.

Ellis County

Two new producers were completed in the Bemis-Shutts district, Ellis County.

L. H. Wentz No. 2 Bemis, SE NE NW section 28-11-17w, found Siliceous lime at 3,461 feet, was bottomed at 3,466 feet, pumped 716 bbls. of oil in six hours and made potential of 2,577 bbls.

Amerada Petroleum Corp. No. 1 Hadley, SW SW SE section 31-11-17w, was acidized, pumped 349 bbls. of oil in six hours and made potential of 1,257 bbls. Top of Siliceous lime was 3,611 feet; total depth 3,637 feet.

Western Kansas Oil & Refining Co. and others No. 1 Jensen, NW cor. section 12-12-18w, had Siliceous lime at 3,662-91 feet, total depth, had no showings of oil and was dry and abandoned.

The following new operations in Ellis County were reported: Indian Territory Illuminating Oil Co. No. 1 Staab, SE SW NW section 11-12-18w, cellar; Aylward Production Co. No. 3 Meis, NE NE NW section 6-12-17w, building; Wolf Creek Oil Co. No. 2 Bemis A, SE SE NW

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1937 COMPOSITE CATALOG

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section 4-12-17w, building; Blackwell Oil & Gas Co. No. 1 Richmond, SW SE SE section 15-11-17w, location; Gulf Oil Corp. No. 1 Clause, SW SE SW section 7-11-16w, rig.

Ellsworth County

Spencer & Yarnell No. 2 Patzner B, NE NW SW section 31-17-10w, Ellsworth County sector of the Bloomer pool, found Siliceous lime at 3,270 feet, was bottomed at 3,274 feet, treated with acid, pumped 770 bbls. of oil in 12 hours and made potential of 1,540 bbls.

Rush County

Morgan & Flynn and Russell Cobb No. 1-A Korll, C NW section 23-18-16w, an old well in the Otis area, Rush County, was deepened from 3,516 feet to 3,550 feet and flowed 1,589 bbls. of oil in 24 hours, with about 25,000,000 feet of gas. It is one of the largest oil wells to be completed in the Otis field. Originally it was completed about six years ago as a gasser in Reagan sand.

Rice County

The largest well completed in Rice County in the past week was Dick Sage and others No. 7 Gossman, NW cor. section 9-21-7w, in the Theede area. It had Conglomerate at 3,351-52 feet, total depth, flowed 1,375 bbls. of oil in six hours and made potential of 5,212 bbls.

L. E. Douglass No. 12 Theede, SW SE SW section 9-21-7w, had Conglomerate at 3,374-84 feet, total depth, pumped and flowed 392 bbls. of oil in six hours and made potential of 1,486 bbls.

Atlantic Refining Co. No. 3 Patton B, SW NE NE section 7-21-7w, had Conglomerate at 3,332-39 feet, total depth, was shot, swabbed 95 bbls. of oil in six hours and was completed as a minimum 15-bbl. well. Same company's No. 3 Mills, SW NW NW section 8-21-7w, found Conglomerate at 3,332 feet, total depth 3,342 feet, plugged back to 3,340 feet and was completed as a 15-bbl. minimum well.

T. M. Deal Oil & Gas Co. No. 1 Hauschild, SW SW SE section 11-21-7w, topped Conglomerate at 3,364 feet, had Chat at 3,405-09 feet, total depth, and was dry and abandoned.

D. R. Lauck No. 2 Heter, NE SE SE section 1-21-8w, topped Conglomerate at 3,342 feet, had Chat at 3,361 feet, and was dry and abandoned at 3,390 feet, total depth.

Continental Oil Co. and others No. 2 Lansing A, SE NE SW section 25-18-8w, Geneseo district, topped Siliceous lime at 3,116 feet, was bottomed at 3,172 feet, acidized and pumped 1,497 bbls. of oil in 24 hours. Same company's No. 1 Warner, NE NW NW section 6-19-7w, had Siliceous lime at 3,252 feet, total depth 3,257 feet, swabbed 382 bbls. of oil in 10 hours, was acidized and made potential of 1,547 bbls.

Phillips Petroleum Co. No. 1 Bolton, SW NW NE section 31-18-7w, was dry and abandoned at 3,275 feet, total depth.

Empire Oil & Refining Co. No. 3 Weiland, NW SW SE section 32-19-9w, had Siliceous lime at 3,248-65 feet, total depth, and was dry and abandoned.

Gulf Oil Corp. No. 1 Lyons, NW NE NE section 18-20-9w, topped Siliceous lime at 3,294 feet, was bottomed at 3,308 feet, pumped 795 bbls. of oil in 24 hours, down four hours, was acidized and made potential of 978 bbls.

J. H. Tatlock No. 6 Poncin, SE NE NE section 5-20-10w, found Siliceous lime at 3,313½ feet, total depth 3,320 feet, was acidized, pumped 219 bbls. of oil in six hours and made potential of 788 bbls. Same operators No. 3 Bayer, NE NE NW section 7-20-10w, found Siliceous lime at 3,307 feet, total depth 3,312 feet, was acidized, pumped 341 bbls. of oil in six hours, and made potential of 1,229 bbls.

Reno County

National Petroleum Corp. No. 2 State, C N half NW NE section 19-24-4w, Reno County, Burrton area, found Chat at 3,342 feet, was bottomed at 3,391 feet, acidized and flowed 1,087 bbls. of oil in 24 hours. Same company's No. 7 Tucker, SE SE NW section 19-24-4w, had Chat at 3,328-88 feet, total depth, was treated with acid, and pumped 453 bbls. of oil in 24 hours.

Indian Territory Illuminating Oil Co. No. 3 Mueller, SW NW NE section 30-24-4w, found Chat at 3,327 feet, total depth 3,375 feet, was acidized and pumped and flowed 558 bbls. of oil and 51 bbls. of water in 24 hours.

Olson Drilling Co. and Shell Petroleum Corp. No. 9 Goering, SW NW SW section 26-23-4w, topped Chat at 3,274 feet, had Hunton lime at 3,581-84 feet, total depth, and pumped 1,368 bbls. of oil in 24 hours.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 2 Moore, SE cor. section 8-26-4w, Hilger pool, had Viola lime at 4,022-24 feet, total depth, and pumped and flowed 1,058 bbls. of oil in 21 hours, cutting 4 per cent water.

Magnolia Petroleum Co. No. 5 Harris, SW NW SW section 9-26-4w, pumped 1,285 bbls. of oil in 24 hours after acid treatment. It had Viola lime at 4,023-26 feet, total depth.

New work in Reno County: Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 3 Moore, NE SE SE section 8-26-4w, location; Pryor & Lockhart and others No. 1 Stuskey, NW SW SW section 31-25-5w, building rig; National Petroleum Co. No. 9 Tucker, C W half W half NE section 19-24-4w, rig; Gled Oil Co. No. 2 Fran A, SE SW NW section 2-24-4w, rigging up rotary.

Harvey County

Tom Palmer No. 1 Murphy, SW SW SE section 30-23-3w, Harvey County sector of the Burrton field, had Chat at 3,260-61 feet, total depth, plugged back to 3,357 feet, was acidized and pumped and flowed 316 bbls. of oil in 24 hours.

Olson Drilling Co. and others No. 1 Day, NW NW SE section 30-23-3e, was location for a new Harvey County test.

Barton County

Carter Oil Co. No. 1 Kroutwurst, NE SE NW section 10-17-11w, Barton County, made potential of 1,076 bbls. of oil after acid treatment and was completed. It topped Siliceous lime at 3,306 feet, was bottomed at 3,321½ feet, and pumped 248 bbls. of oil in six hours.

New work in Barton County: Stanolind Oil & Gas Co. No. 3 Reiman, SW NW NW section 34-16-13w, building rig; same company's No. 1 Knopp, NE cor. section 32-19-11w, location; Price and others No. 2 Craft, NW NW NE section 10-17-11w, location; same operators' No. 3 Craft, NW SW NE section 10-17-11w, location; Indian Territory Illuminating Oil Co. No. 2 Schrapel A, NE SE NE section 26-20-11w, moving in rotary; Magnolia Petroleum Co. No. 11 Roetzel, NW SW SE section 24-20-11w, cellar; Ohio Oil Co. No. 1-A Brack, C NW section 20-18-15w, building rig.

Sedgwick County

I. W. Murfin and others No. 1 Stark, NW NW SW section 12-25-2e, Sedgwick County, had Siliceous lime at 3,352-66 feet, total depth, and was dry and abandoned.

Magnolia Petroleum Co. No. 4 Vickers, SW SW NW section 20-27-2e, Eastborough area, topped Chat at 2,937 feet, total depth 2,946 feet, and pumped 100 bbls. of oil daily.

Butler County

Phillips Petroleum Co. and others No. 2 Houston, SW SE SE section 1-25-3e, Butler County, topped Kansas City lime at 2,205 feet, total depth 2,685 feet, was acidized and pumped 10 bbls. of oil and 10 bbls. of water daily.

Sheldon & Wixson and others No. 1 Moore, NW NW SE section 11-25-3e, had Mississippi lime at 2,689-2,700 feet, total depth, was acidized and pumped 92½ bbls. of oil in 48 hours.

Saco Oil Co. No. 1 Powers, NE SE NW section 34-28-6e, new Butler County operation, had dug pits.

Greenwood County

Shull Drilling Co. No. 6 Allis, C W half SE NW section 17-24-13, Greenwood County, found Mississippi lime at 1,590-1,605 feet, total depth, and after acid treatment pumped 120 bbls. of oil in 24 hours, completed.

Ward McGinnis and others No. 1 Jobes and Smith, NW NW SE section 10-24-13, was a machine for a new Greenwood County test.

Elk County

Murphy Oil Co. No. 7 Denton, SW NW SW section 3-31-8e, Elk County, was dry and abandoned at 1,845 feet, total depth.

Chautauqua County

Sinclair Prairie Oil Co. No. 4 Borrum, SW SW NE section 20-34-9, Chautauqua County, topped Pawnee formation at 1,777 feet, was bottomed at 1,792 feet, acidized and pumped 100 bbls. of oil in 24 hours.

Steinbuchel and others No. 1 Atkinson, SE SE NE section 21-33-13, topped Siliceous lime at 1,900 feet, total depth 2,115 feet, and was dry and abandoned.

Barbara Oil Co. No. 3 Garham, NE SE NW section 23-32-10, was rigging up machine for a new Chautauqua County test.

Sumner County

Stelber Oil Corp. No. 5 Rothrock, NE NW NE section 4-32-1w, Wellington area, Sumner County, topped Chat at 3,647 feet, total depth 3,703 feet, was acidized and flowed 308 bbls. of oil in 24 hours.

Sinclair Prairie Oil Co. No. 1 DeTurk, NW NW SW section 4-32-1w, found Chat at 3,645 feet, was bottomed

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at 3,679 feet, acidized and pumped 242 bbls. of oil in 24 hours.

Continental Oil Co. No. 5 Rothrock, NW SW NW section 4-32-1w, was completed as a 15-bbl. minimum well at 3,686 feet, total depth.

Empire Oil & Refining Co. No. 1 McCoy, SE SE SW section 11-35-2e, was location for a new Sumner County test.

Cowley County

E. B. Shawver No. 2 Brewer, NW SE SE section 5-34-3e, Cowley County, had sand at 3,260 feet, total depth 3,313 feet, swabbed 51 bbls. in eight hours and was completed as a 15-bbl. minimum well.

O. E. Roth and others No. 1 Wall, SE SE NE section 30-30-5e, Cowley County, was a rig.

Various First Reports

Barbara Oil Co. No. 1 Thompson, C SW SW section 22-33-13w, Barber County, was moving in rotary tools.

Morgan & Flynn and Cobb No. 1 Hare, C NW section 9-13-37w, wildcat in Logan County, was moving in machine.

In McPherson County, T. C. Johnson No. 3 Good, NE SE NW section 13-19-3w, was a cellar; W. R. McCluskey No. 1 Blair, NW SW NW section 32-19-1w, was a location.

In Rooks County, Phillips Petroleum Co. No. 1 Westhusin, SE SE NE section 11-9s-17w, was moving in machine; Atlantic Refining Co. No. 1 McClay, NW NW SW section 12-9s-17w, was a location.

In Stevens County, Trees and Helmerich & Payne No. 1 Wheeler, C NW section 35-34-8w, was drilling at 2,300 feet.

In Trego County, Phillips Petroleum Co. No. 1 Trego, C SE NW section 14-12-23w, was a location.

In Woodson County, B. & B. Oil Co. No. 2 Carkery, NE NW NW section 29-25-14, was drilling at 1,500 feet; Jones and others No. 1 Figge, NW SE NW section 27-23-14, was rigging up machine.

Central West Fields

(Continued from Page 65)

at 1,052-93 feet. It gauged 368,000 feet of gas naturally. In section 10, Cambridge Township, of the same county, George Kernodle No. 2 Robert B. Brothers was not a commercial in the Berea. Three thousand feet of gas was encountered at 1,250-91 feet in the Berea and was shot increasing the flow to 11,000 feet. Rather than abandon the well, it was sold to the land owner.

In Washington County Patterson & Miller No. 3 M. J. Smith, section 19, Ludlow Township, was a small gas well in the Injun sand at 1,300-36 feet and 35,000 feet of gas was encountered at 1,420-36 feet. Burt and others No. 23 John H. Pew, Lot 1064, Palmer Township, of the same county, made 2 bbls. of oil in the Peaker sand at 432-78 feet. The total depth of the hole was 500 feet. McCoy and others No. 8 Lizzie Hale, Lot 1096, Palmer Township, was abandoned as a dry hole in the first Cow Run sand at 551-60 feet with a total depth of 597 feet. In section 28, Warren Township, Washington County, Ross and others No. 16 James M. Cooper made a slight show of oil in the Macksburg 500-foot sand at 935-40 feet. The well was shot, but made no increase. It was plugged and abandoned.

In Perry County the Wiser Oil Co. No. 1 Walter B. Cullman, section 17, Reading Township, swabbed 5 bbls. of oil the first 24 hours after a shot. The first Clinton was found at 2,949-63 feet, with the second from 2,970-82 feet. The total depth of the hole was 2,992 feet. In section 20, Monday Creek Township, Perry County, Moffit & Webb No. 2 M. W. Howdyshell was abandoned with a hole full of water in the Berea at 729-37 feet.

In section 30, Green Township, Hocking County, the Griffin Producing Co. No. 2 R. C. Park was a commercial well in the Clinton sand at 2,929-64 feet. The well made 250,000 feet of gas naturally and was shut in the casing 30 minutes after a shot with a gauged flow of 1,360,000 feet.

In Lawrence County the Shale Development Co. No. 2 First Huntington National Bank, section 18, Union Township, was completed as a commercial well, shut in on the casing, with an open flow of 187,000 feet 42 hours after a shot. The gas was encountered at 2,600 feet and in the shale. The total depth of the hole was 2,970 feet.

In Athens County the First National Bank No. 2 A. Fensterwald, Fraction 12, Rome Township, made three-fourths barrel of oil the first 24 hours after a shot in the first Cow Run sand at 450-79 feet. The total depth was 490 feet. In section 31, Athens Township, of the same county, Cross & McCune No. 2 Charles O. Lowery was a 10-bbl. oil well after a shot. Production was encountered in the first Berea at 1,157-67 feet. In Fraction 31, Trimble Township, of the same county, the Ohio Fuel Gas Co. No. 156 Sunday Creek Coal Co. was abandoned as a dry hole at a total depth of 1,253 feet. The first Berea occurred at 1,167-88 feet, making only a show of oil, while the second Berea, encountered at 1,234-39 feet, was dry.

In Meigs County McKnight and others No. 1 Norman Spires, section 2, Rutland Township, made 500,000 feet of gas naturally in the Salt sand at 627-80 feet, the rock pressure being 160 pounds.

In Noble County G. M. Harper No. 1 John Shafer, section 32, Enoch Township, was abandoned with only a small show of gas and oil in the Stray sand at 579-618 feet. The total depth of the hole was 635 feet.

EASTERN KENTUCKY OPERATIONS

ASHLAND, Ky., Aug. 2.—Four oil well completions and one dry hole are included in the drilling reports in Eastern Kentucky with the reports indicating light operations in many parts of the area.

Evans Oil & Gas Co. completed No. 13 on the J. F. Raines farm on Billie's Fork in the Big Sinking district of Lee County at a total depth of 960 feet with a recorded flow of 20 bbls. of oil per day.

Mrs. Agatha Wireman reports the completion of No. 18 on the J. M. Townsend land on South Fork of Powell County, with a flow of 10 bbls. of oil per day. No report of the total depth was given.

The Evans Oil & Gas Co. got a dry hole in well No. 1, Josephus Howard farm on Mason Creek in the Burning Fork district of Magoffin County. Drilling ceased at 1,134 feet with a small showing of oil.

Lee County is still leading the list in oil well completions for the month, with several wells rapidly nearing the finished stage. A second report from McConn & Wiseman confirms the fact of a daily flow of 50 bbls. of oil in well No. 3 on the Andrew Combs farm on Billie's Fork in the Big Sinking district of Lee County.

The report by counties is as follows:

In Powell County, George B. Frelison and others have reached the 600-foot level in No. 2 E. W. Baker, on South Fork.

Lee County

The Maretta Oil Co. is drilling at 935 feet in No. 1 W. T. Smith, on Billie's Fork, Lee County. C. E. Townsend, agent, is down 630 feet in No. 4 Andrew Combs. Thomas Wilmer is drilling at 500 feet in No. 3 C. J. Tipton, also on Billie's Fork. Central States Oil Co. is down 725 feet in No. 4 Morris Shoenonn at Zoe.

Magoffin County

A. V. Hoenig completed No. 34 Green Rice, on Litteral Fork in Wheelersburg district, at 1,100 feet with total flow of 5 bbls. of oil per day.

Elliott County

The Necessity Oil Co. is down 250 feet in No. 2 Claud Wheeler, on Newcum Creek in the Isonville district of Elliott County.

Knott County

The Inland Gas Corp. is down 2,578 feet in No. 2 R. C. Kilgore, on Right Fork of Troublesome Creek in Knott County, with drilling continuing in slate and shells. The same corporation is running shot in No. 1 E. A. Hammonds nearby, with drilling completed at the 3,160-foot level in white slate. Inland has reached 1,408 feet in salt sand in No. 1 Ritter Short, on Wiley Fork of Troublesome Creek.

The Kentucky West Virginia Gas Co. is building road to No. 5,228 Nancy Johnson, on Caney Fork, and is rigging up No. 554 Lark Slone, on Jones Fork. The same firm is spudding at the 12-foot mark in No. 553 Isom Gibson.

Martin County

The Kentucky-West Virginia Gas Co. completed No. 5,223 C. W. Preece with the crew swabbing oil. This well, in Martin County, is below the 1,500-foot mark. No report of production was available.

Floyd County

One operation is reported in Floyd County with Kentucky-West Virginia Gas Co. building foundation at No. 555 Grover Jervis, on Home Branch of Buffalo Creek.

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Rocky Mountain Area

By
T. R. INGRAM

ICKES SAYS NO TO INDIANS' PETITION FOR A LEASE SALE

DENVER, Colo., Aug. 2.—A second deep test in eastern Colorado, Morgan & Flynn No. 1 Hostetter in Kiowa County, has been spudded. There were no completions in Colorado.

The Continental Oil Co. No. 10 Tom Bell Cattle, a Minnelusa test in Lance Creek, Wyoming, flowed 12 bbls. an hour through the tubing and is coring deeper. The Italo Petroleum Corp. will drill a semiwildcat on the flank of the Hamilton dome, Hot Springs County. The Empire State Oil Co. completed a 20-bbl. Sundance sand well at Poison Spider.

Secretary of the Interior declined to approve sale of 11,000 acres of Tribal leases southwest of Cut Bank field in Montana and thereby saved operators a heavy drilling campaign. Cut Bank had two new operations, but no completions. There were eight completions and seven first reports in the Kevin-Sunburst field.

One new operation was reported in the Clay Basin field in Utah.

The Joe Cook test in Lincoln County, Nebraska, is to be drilled to the granite.

NEW MEXICO

The third producer in the Farney pool, Lea County, was completed at Continental Oil Co. No. 2-A-5 Farney, C NE SE section 5-26-36, which extended production a short distance to the northeast. It flowed 201 bbls. of oil and 86 bbls. of water daily through choke on tubing, with 1,960,000 feet of gas. It was bottomed at 3,785 feet, plugged back to 3,796 feet and acidized.

In the South Eunice district, Empire Oil & Refining Co. No. 4-A Clossen, C SE SE section 6-22-36, was the largest New Mexico producer completed during the past week. It flowed 334 bbls. of oil in 3½ hours through tubing set at 3,822 feet, naturally. Gas volume was 2,000,000 feet daily. Top of pay was 3,770 feet, total depth 3,830 feet.

Gulf Oil Corp. No. 2-C Kutter, NE section 18-19-37, Monument field, was completed at 4,030 feet, total depth, in lime, and flowed 154 bbls. of oil in six hours. Same company's No. 1 Knight, section 27-24-37, Jal area, topped pay at 3,455 feet, total depth 3,574 feet, and flowed 64½ bbls. of oil by heads in 17 hours, through choke on tubing.

Repollo Oil Co. No. 6 Byrd, NE NW SW section 11-20-36, flowed 300 bbls. of oil in 18 hours and was completed at 3,890 feet, total depth.

One well was completed in Eddy County at F.W.&Y. Oil Co. No. 4 Gissler, C SE SE section 14-17-30, Jackson pool, reputedly the largest producer in the area. It was estimated good for 200 bbls. of oil naturally, was acidized with 2,000 gallons and was reported to have flowed 200 bbls. of oil in two hours. It was bottomed at 3,462 feet.

Lea County

Amerada Pet. Corp. No. 3 Laughlin, C NW NE sec. 9-20-37. Drlg. Drlg. 3,910 ft.
Amerada Pet. Corp. No. 4-T State, sec. 25-19-36. T.D. 4,055 ft.; shut in; may acidize.
Anderson-Prichard Oil Corp. No. 1 Wells, C SE SE sec. 5-25-37. Drlg. 3,575 ft.
Anderson-Prichard Oil Corp. No. 1 Gregory, NW sec. 33-25-37. Rig.
Anderson-Prichard Oil Corp. No. 2 Langlie, SE sec. 8-25-37. Drlg. 2,000 ft.
Anderson-Prichard Oil Corp. No. 1 Lanehart, SW sec. 21-25-37. Drlg. 2,750 ft.
Atlantic Ref. Co. No. 1-P State, C SE NW sec. 25-20-36. Drlg. 938 ft.
J. W. Brown No. 1 State, C SW SW sec. 22-21-24. Top anhydrite 1,765 ft.; drlg. 2,775 ft.
Continental Oil Co. No. 1 Ailes, C SE SE sec. 35-20-38. Drlg. 4,620 ft.
Continental Oil Co. No. 1-A-15 Cline, NW sec. 15-23-37. Wildcat. P.B. from 3,860 ft. to shut off water.
Continental Oil Co. No. 2-A-15 Elliott, SE sec. 15-22-37. Location.
Continental Oil Co. No. 1 Hawk, SE sec. 5-21-37. Loc.
Continental Oil Co. No. 1 Jack, C NW NE sec. 27-34-37. Derrick.
Continental Oil Co. No. 6-A-30 Lockhart, NW sec. 30-21-36. Location.
Continental Oil Co. No. 1-B-30 Lockhart, C SE SW sec. 30-21-36. Tested 1 bbl. oil hourly through choke; T.D. 3,965 ft. in lime.
Continental Oil Co. No. 2-B-10 Sanderson, NE SE NE sec. 10-20-36. Drlg. 3,155 ft.
Continental Oil Co. No. 1-A-20 State, NE NE SE sec. 20-20-37. Drlg. 1,195 ft.
Continental Oil Co. No. 1 State, C SW NW sec. 16-22-36. T.D. 3,812 ft.; to deepen.
Continental Oil Co. No. 1-E-17 State, C SE SE sec. 17-22-36. T.D. 2,278 ft.; W.O.C.
Continental Oil Co. No. 1 Stevens, C SW NW sec. 34-23-36. T.D. 3,691 ft.; running Schlumberger survey.
Continental Oil Co. No. 1 Wantz, C SW SW sec. 21-21-37. T.D. 3,872 ft.; installing pump.
Cranfill & Germany No. 1 Weir, C NE NE sec. 15-20-37. T.D. 4,210 ft.; S.D.O.
Culbertson & Irwin No. 1 Boesche, NE sec. 2-21-32. Wildcat. Drlg. 3,300 ft.
Culbertson & Irwin No. 1 Humphreys, NE NW NE sec. 3-25-37. Drlg. 3,125 ft.
Culbertson & Irwin et al No. 1 Moseley, SE NE SW sec. 34-24-37. T.D. 3,485 ft.; to shoot.
Devonian Oil Co. No. 2 Christmas, SE sec. 28-22-37. Rig.
Devonian Oil Co. No. 3 Christmas, C SW SE sec. 28-22-37. Cellar and pits.
Empire Oil & Ref. Co. and Repollo Oil Co. No. 2 Brunson, NW sec. 3-22-37. Location.
Empire Oil & Ref. Co. No. 5 Clossen A, SE SE NE sec. 6-22-36. Moving in.
Empire Oil & Ref. Co. and Atlantic Ref. Co. No. 1 Hodges, NE cor. sec. 8-24-37. Drlg. 3,310 ft.
Empire Oil & Ref. Co. No. 1 Parsons, C SE SE sec. 27-19-36. Drlg. 3,400 ft.
Empire Oil & Ref. Co. No. 1-G State, sec. 2-21-36. T.D. 3,900 ft.; shut down.
Empire Oil & Ref. Co. No. 2-G State, C SE SW sec. 2-21-37. Drlg. 3,850 ft.
J. E. Farrell No. 2-B Walden, C NE SW sec. 15-22-37. Drlg. 3,590 ft.
J. E. Farrell No. 2-C Walden, C SE SW sec. 15-22-37. Drlg. 3,665 ft.
Bert Fields No. 3 Turner State, NW sec. 32-20-37. Drlg. 2,308 ft.
Gulf Oil Corp. No. 1-E Arnott-Ramsey, C SW SW sec. 16-25-37. T.D. 3,497 ft.; testing.
Gulf Oil Corp. No. 2 Baker, SE sec. 5-22-37. T.D. 20 ft.; set csg.
Gulf Oil Corp. No. 1 Boyd, sec. 23-22-37. T.D. 3,681 ft.; testing.
Gulf Oil Corp. No. 2 Cole, C NE NE sec. 16-22-37. T.D. 1,141 ft.; shut down.
Gulf Oil Corp. No. 3 Cole, C SE NE sec. 16-22-37. Derrick.
Gulf Oil Corp. No. 2 Day, NW sec. 6-22-36. Drlg. 2,370 ft.
Gulf Oil Corp. No. 1 Elliott, SW SE SE sec. 15-25-37. Drlg. 3,380 ft.
Gulf Oil Corp. No. 2 Gramm State, C NW SE sec. 17-19-37. T.D. 3,990 ft.; testing.
Gulf Oil Corp. No. 1-H Graham State, SW sec. 13-20-36. Location.
Gulf Oil Corp. No. 1-D Janda, C NW SW sec. 2-21-36. Drlg. 2,100 ft.
Gulf Oil Corp. No. 1-D Kutter, C SW SW sec. 8-19-37. Rig.
Gulf Oil Corp. No. 1 Monda, C SE SW sec. 21-22-37. Drlg. 2,950 ft.
Gulf Oil Corp. No. 2 Reeves, C SE NW sec. 29-20-37. T.D. 3,840 ft.; testing.
Gulf Oil Corp. No. 1 Rinewalt, NW sec. 4-22-37. Drlg. 1,900 ft.
Gulf Oil Corp. No. 1 Sticher, C SE SW sec. 4-22-37. Drlg. 2,312 ft.
Gulf Oil Corp. No. 2 Westfall, SE sec. 15-25-37. T.D. 3,418 ft.; testing.
Gulf Oil Corp. No. 1-B White, SE sec. 35-20-36. Derrick.
Homestead No. 1 Clifford, SW sec. 12-26-32. Wildcat. Moving in machine.
Humble O. & R. Co. No. 1 Fopeano, C SE SW sec. 25-20-36. Drlg. 3,185 ft.
Humble O. & R. Co. No. 2 Saunders, C NW NW sec. 9-22-34. T.D. 1,135 ft.; S.D. for repairs.
Jal Nat. Gas Corp. No. 2 Justis, NE sec. 20-25-37. T.D. 3,015 ft.; F. 60 bbls. oil per day; to deepen.
Landreth Prod. Co. No. 3 Grizzell, C NW SW sec. 5-22-37. Drlg. 3,200 ft.
Magnolia Pet. Co. No. 4 Carson, SW sec. 28-21-37. T.D. 3,770 ft.; testing.
Magnolia Pet. Co. No. 3 Cary, sec. 21-22-37. T.D. 3,620 ft.; F. 10 B.O.P.H.
Magnolia Pet. Co. No. 4 Cary, C SW SW sec. 21-22-37. Derrick.
Magnolia Pet. Co. No. 1 State G, NW NW NE sec. 34-17-34. T.D. 4,905 ft.; P.B. 4,794 ft.
Magnolia Pet. Co. No. 2 State-Bridges, sec. 14-17-34. Drlg. 3,025 ft.
Maljamar O. & G. Co. No. 3 Mitchell, C NE NE sec. 20-17-32. Drlg. 3,970 ft.
J. A. Mascho No. 1 Cloyd, C SE SE sec. 20-22-33. Wildcat. Derrick.
McDonald & Weiner No. 1 Elliott, SE cor. sec. 19-21-37. Drlg. 350 ft.
Mid-Continent Pet. Corp. No. 3 Greer, C SE NW sec. 21-22-36. Drlg. 2,400 ft.
Mid-Continent Pet. Corp. No. 1 Owen, C NW NW sec. 3-22-37. Drlg. 3,700 ft.
National Drlg. & Prod. Co. No. 1 Flint, C NE NE sec. 29-20-34. Wildcat. Drlg. 500 ft.
Ohio Oil Co. No. 3 State-Hansell, C W½ NE NE sec. 16-20-37. Drlg. 3,750 ft.
Ohio Oil Co. No. 7 State-McDonald, C SW SE sec. 16-22-36. T.D. 3,871 ft.; cleaning out.
Ohio Oil Co. No. 3 State-McGrail, NE sec. 27-19-36. Drlg. 3,100 ft.
Ohio Oil Co. No. 2 Turner, SW NW SE sec. 29-21-37. T.D. 2,715 ft.
Phillips Pet. Co. No. 1 Lea, C NW NW sec. 30-17-34. Wildcat. Set 9⅝-in. csg. 2,762 ft.; W.O.C. at 2,781 ft.; T.D.
Plains Prod. Co. No. 1 Humphreys, NE sec. 3-25-37. Loc.
Plains Prod. Co. No. 2 Moseley, SE sec. 34-22-37. Cellar.
Repollo Oil Co. No. 2 Christmas, sec. 28-22-37. Drlg. 4,000 ft.
Repollo Oil Co. No. 3 Jamison, SW NE NE sec. 21-24-37. Drlg. 3,112 ft.
Repollo Oil Co. No. 1 Turner, sec. 29-21-37. Drlg. 3,510 ft.
Repollo Oil Co. No. 1 White, SE sec. 24-20-36. Drlg. 580 ft.
Rowan Drlg. Co. No. 1-A Elliott, SW sec. 27-22-37. T.D. 1,170 ft.; moving in standard tools.
Rowan Drlg. Co. No. 1 Walden, C NW NW sec. 15-22-37. Drlg. 3,612 ft.
Rowan Drlg. Co. No. 2 Walden, C NE NW sec. 15-22-37. Derrick.
Samedan Oil Co. No. 3 Hughes, sec. 4-23-27. T.D. 3,631 ft.
Schermerhorn Oil Co. No. 2 Woolworth, sec. 29-24-37. Drlg. 460 ft.
Skelly Oil Co. No. 1 Baker, C NW NW sec. 26-22-37. Drlg. 3,321 ft.
Skelly Oil Co. No. 1-B Harrison, C NE NW sec. 9-23-37. Drlg. 3,561 ft.
Skelly Oil Co. No. 2-B Harrison, C NW NW sec. 9-23-37. Drlg. 2,610 ft.
Skelly Oil Co. No. 1 Grizzell, C SW NE sec. 6-22-37. T.D. 1,154 ft.; running 8-in. csg.
Skelly Oil Co. No. 1 Hill, C Lot 7, sec. 6-21-37. Drlg. 3,200 ft.
Skelly Oil Co. No. 3 G. W. Sims, C NW NE sec. 9-23-37. Drlg. 2,860 ft.
Skelly Oil Co. No. 2 H. O. Sims, sec. 4-23-37. Drlg. 3,495 ft.
Skelly Oil Co. No. 1-C R. R. Sims, sec. 3-23-37. Drlg. 3,622 ft.
Skelly Oil Co. No. 7 Van Etten, sec. 9-20-37. Drlg. 2,612 ft.
Skelly Oil Co. No. 8 Van Etten, sec. 9-20-37. Drlg. 2,567 ft.
Stanolind O. & G. Co. No. 4-A Gilluly, C NW NE sec. 24-20-36. T.D. 3,780 ft.; W.O.C.
Stanolind O. & G. Co. No. 5-A Gilluly, NE sec. 25-20-26. Drlg. 2,836 ft.
Stanolind O. & G. Co. No. 6-A Gilluly, C NE SW sec. 25-20-36. Rig.
Stanolind O. & G. Co. No. 1 Hill, C Lot 16, sec. 5-21-36. Drlg. 3,825 ft.
Stanolind O. & G. Co. No. 1-B Meyers, C NW NW sec. 7-24-37. Derrick.
Stanolind O. & G. Co. No. 3 Meyers, SE sec. 4-24-37. T.D. 3,640 ft.; cleaning out.
Stanolind O. & G. Co. No. 1 State, C SE SE sec. 2-21-36. Location.
Stanolind O. & G. Co. No. 2 State, C NE SE sec. 2-21-36. Rig.
Stanolind O. & G. Co. No. 8 Terry, C NW SE sec. 9-19-38. T.D. 4,163 ft.; to deepen.
W. H. Street No. 2 Wood, C SW NE sec. 22-22-37. Drlg. 3,060 ft.
Texas Co. No. 2 Lea, C SE NE sec. 15-20-34. Cmtd. csg. at 3,535 ft.
Texas Co. No. 11 Lieu Lands, C NW NW sec. 20-20-37. T.D. 3,867 ft.; testing.
Texas Co. No. 12 Lieu Lands, C SW SW sec. 20-20-37. T.D. 3,858 ft.; testing.
Texas Co. No. 13 Lieu Lands, sec. 19-20-37. Drlg. 350 ft
Texas Co. No. 4 Saunders, sec. 18-19-37. Drlg. 1,375 ft.
Texas Pacific C. & O. Co. No. 4-A State, C SW SW sec. 9-22-36. T.D. 3,878 ft.; P.B. 3,877 ft.; cleaning out.
Texas Pacific C. & O. Co. No. 5-A State, sec. 19-22-36. Location.
Tide Water Associated Oil Co. No. 3-J State, C SE NW sec. 17-19-37. Drlg. 3,812 ft.
Western Gas Co. No. 3 Harrison, C NW SW sec. 20-24-37. Coring 3,637 ft.
Western Gas Co. No. 4 Harrison, C NW SW sec. 29-24-37. Drlg. 3,439 ft.
Williams & Cockburn No. 3 Hiller, C SW SW sec. 23-17-32. T.D. 3,873 ft.; to run tubing.
Woodley No. 1 Shahan, SE sec. 28-25-37. Set 8-in. 1,213 ft.; W.O.C. at 1,215 ft., T.D.

Eddy County

F. E. Baker No. 1 Eddy, NE sec. 12-22-27. T.D. 55 ft.; M.I.M.
Barnsdall Oil Co. No. 5 Dodd, sec. 22-17-29. T.D. 2,757 ft.; P.B. 2,730 ft.; est. 60 bbls. oil.
Barnsdall Oil Co. No. 6 Dodd, sec. 22-17-29. Drlg. 2,680 ft.
Fred Brainerd No. 2 Brainerd, sec. 5-18-27. Drlg. 400 ft.
Ed Bryant No. 1 Stebbins, C NE SW sec. 19-20-29. Drlg. 260 ft.
T. D. Collins No. 1 Weiler, C NW NW sec. 13-24-36. Drlg. 1,735 ft.
Continental Oil Co. No. 1 Barrett, SE sec. 14-20-30. Loc.
Continental Oil Co. No. 1 Etz, C NW NE sec. 24-16-30. Drlg. 1,840 ft.
William Dooley No. 1 Featherstone, NE NW NW sec. 24-20-26. T.D. 387 ft.
Finley & Cherry No. 1 Buchley, C NW NW sec. 28-16-31. Wildcat; location.
Flint Prod. Co. No. 1-B State, SE sec. 20-17-30. Drlg. 3,800 ft.
Franklin Pet. Corp. No. 1 Nelson, NW sec. 4-18-30. Wild cat; T.D. 2,953 ft.; fishing.
F. W. & Y. Oil Co. No. 5 Gissler, C NE SE sec. 14-17-30. Drlg. 3,410 ft.
F. W. & Y. Oil Co. No. 3 Jackson, C NW SE sec. 13-17-30. T.D. 2,969 ft.; setting casing.
F. W. & Y. Oil Co. No. 4-A Jackson, NE sec. 13-17-30. T.D. 2,560 ft.; S.D.
F. W. & Y. Oil Co. No. 5-A Jackson, NE sec. 13-17-30. Rig.
F. W. & Y. Oil Co. No. 3-X Jackson, SE sec. 13-17-30. Drlg. 3,010 ft.
F. W. & Y. Oil Co. No. 2-B Stevens, NW sec. 13-17-30. Rig.

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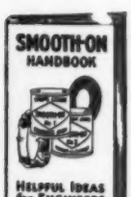

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Manufacturers Installation Engineers Sales - Service

Industrial Oil Burners Gas Burners and Furnace Equipment

NATIONAL AIROIL BURNER

NAIROIL Automatic Oil Burners for HOMES APARTMENT HOUSES CHURCHES, STORES FACTORY BUILDINGS OFFICE BUILDINGS

Offices and Salesrooms 1325-27 Girard Avenue Philadelphia, Pa.

Factory L St. & Sedgley Avenue

F. W. & Y. Oil Co. No. 2-A Stevens, C NW SW sec. 13-17-30. Drlg. 2,705 ft.
F. W. & Y. Oil Co. No. 3-A Stevens, NW sec. 13-17-30. Drlg. 2,800 ft.
Grayburg Oil Co. No. 3 Keeley, SE NE NE sec. 24-17-29. T.D. 3,108 ft.; flowed 75 to 100 bbls. oil; to retreat.
R. L. Holcomb No. 1 State, NW sec. 22-17-28. Location.
H. & W. Drlg. Co. No. 1 Danford, C SE SE sec. 9-22-29. Hole full of water 3,320 ft., T.D.
C. F. Ingram No. 1 Page, NE NE SW sec. 15-21-28. T.D. 440 ft. in shale.
W. A. Nichols No. 1 Johnson, NE sec. 35-16-21. Wildcat; drlg. 1,710 ft.
Pool Oil & Gas Co. No. 1 Reed, SW sec. 28-24-28. Wildcat; spudded.
Red Lake No. 9 State, sec. 22-17-28. Drlg. 1,425 ft.
Repollo Oil Co. No. 1-D Parke, sec. 15-17-20. T.D. 3,495 ft. acidized; testing.
Republic Prod. Co. No. 2-B Robinson, sec. 27-17-29. Drlg. 2,814 ft.
Paul Sargent No. 1 State, NE sec. 16-17-31. Drlg. 3,035 ft.
A. A. Shugart No. 1 Sullivan, C NW SW sec. 35-18-31. Rig.
W. O. Snyder No. 1 Pecos Irrigation, C NE SE sec. 15-25-28. T.D. 575 ft.; shut down.
Superior Oil Co. No. 1 Foster, SE SE NE sec. 17-17-31. Drlg. 1,350 ft.
Tigner, Etz & Keyes No. 2-B Keyes, NW sec. 10-17-28. Drlg. 550 ft.
Weiner & McDowall No. 1 Kerr, C SE NW sec. 3-24-24. Running csg. to 580 ft.
Western Drlg. & Eng. Co. No. 1 Western, NW sec. 26-17-29. Drlg. 500 ft.
Neil H. Wills No. 1 State, C NW NW sec. 20-20-30. T.D. 1,468 ft.; setting csg.

Chaves County

English & Harmon No. 1 Billingslea, SE sec. 9-15-29. Drlg. 2,980 ft.

Curry County

Bond & Harrison No. 1 Hart Ranch, C NW SE sec. 13-2n-31. T.D. 1,246 ft.; S.D.

Dona Ana County

Juels C. Bertrand No. 1 Casad Permit, sec. 24-26-5e. T.D. 47 ft.; S.D.O.

McKinley County

S. Dysart No. 1 Government, NE sec. 14-14-10w. T.D. 1,390 ft.; fishing.

Otero County

George Mulvey No. 1 State, SW cor. sec. 11-25-8. T.D. 263 ft.; shut down.
Fred Turner No. 1 Evans, NW NW SW sec. 22-14-12. O.W.D.D.; wildcat; T.D. 3,763 ft.; S.D.

Roosevelt County

C. S. Peterson and Conquistadores Oil Co. No. 1 Good, NW SE SE sec. 28-5s-30. Rigging up standard tools.

NORTHWEST NEW MEXICO

Bernalillo County

Norins Realty Co., Inc., No. 2 North Albuquerque, NE SE NW sec. 19-11n-4e. Drlg. below 3,500 ft.

San Juan County

Continental Oil Co. No. 62 Rattlesnake. Drlg. 650 ft.
Anna Oil Corp. No. 6 Govt., SW NE NE sec. 33-30n-11w. Drlg. 700 ft.

Socorro County

R. Allen Brown, Tr., No. 1 Belen Ld. Gr., SE NW sec. 16-2n-1e. R.U.R.

Valencia County

C. A. Groeber et al No. 1 Fuqua, NE NE sec. 19-5n-3e. Drlg. below 640 ft. in valley fill.
Big Three Oil Co. No. 1 Dalies Townsite, sec. 5-6n-1e Rigged and ready to spd.

COLORADO

Adams County

Glenridge Oil Corp. No. 1 Hills, SE cor. sec. 27-3s-64w. S.D. 4,345 ft.

Bent County

Indian Terr. Ill. Oil Co. and Olson Drlg. Co. No. 1 Arbes, C Lot 2, sec. 2-21s-48w. Drlg. 3,500 ft.

Boulder County

J. B. Furstenberg No. 1 Foote, SE sec. 20-1n-70w. T.D. 930 ft.; S.O. in Hygiene; prep. to test.
Boulder Prod. & Dev. Co. No. 11 Harlow Est., SE NE sec. 36-2n-71w. S.D.O. 765 ft.; dry in Muddy.

Kiowa County

Morgan & Flynn et al No. 1 Hostetter, C NW SE sec. 6-20s-46w. Drlg. 1,000 ft.; spd. July 21; set 250 ft. surf. pipe.

Larimer County

Great West O. & G. Corp. No. 1 Haworth, C SW SE sec. 16-4n-69w. Drlg. 700 ft. in Pierre; cmtd. 10½-in. at 590 ft.

Mesa County

Midwest Drlg. & Dev. Co. No. 1 Callahan, NE NW SE sec. 30-8s-97w. Drlg. below 750 ft.

Moffat County

The Kerlyn Oil Co. No. 1 Gail Marrs, on the South Vermilion structure, south of the Hiawatha gas field, was drilling at 2,960 feet at last reports and had not cut any good sands. Such as were encountered did not contain any shows of oil or gas. Hole will be drilled 500 or 600 feet deeper before rig is moved to Shell Creek. This operation formerly was carried as the Anderson-Kerr Drilling Co. Hole is now below horizon in which gas is found in the Wasatch at Hiawatha.

Kerlyn Oil Co. No. 1 Marrs, C SE NE sec. 17-11n-100w. Drlg. 2,960 ft.; (formerly Anderson-Kerr Drlg. Co.).
Morapas Pet. Co. No. 1 Coles, SW SW SE sec. 1-3n-92w. T.D. 1,370 ft.; U.R. 10-in.
Mountain Fuel Supply Co. No. 1 Donnell, C SE NE sec. 31-12n-97w. T.D. 5,878 ft.; P.B. to 5,118 ft.; will perf. pipe and test upper horizons.
Anderson-Kerr Drlg. Co. et al No. 1 Denise, C SE SE sec. 19-9n-99w. S.D. 2,500 ft.; W.O. rotary tools.
Texas Co. No. 4 Iles Inv. Co., Lot 7, sec. 23-9n-92w. T.D. 3,490 ft.; prep. for pmpg. test.

LaPlata County

Nick Spatter No. 1 Bryce, SE SW SW sec. 31-33n-9w. Drlg. 300 ft.

Park County

The South Park Oil Co. No. 1 Lemar, South dome, Hartsel anticline, is drilling at 5,010 feet, in an 8-inch hole. The operator is doing some interesting work on the hole for the purpose of keeping it large enough to land the 6-inch on top of the objective Apache Creek sand. On account of the cavey condition of the formation it is considered risky to carry a long string of pipe. It was necessary recently to sidetrack several hundred feet of 8-inch. Rather than run the 6-inch to carry, about 20 feet of hole is drilled and then cemented. Plug is then drilled and hole deepened 20 feet when it is again cemented. About 20 feet a day can be made in this manner. About 2 pounds of calcium chloride is used to each sack of special oil-well cement, mixing it with hot water. It is allowed to set two hours before drilling of plug is started. The 10-inch is at 4,070 feet. In this manner it is planned to reach the top of the objective sand and then cement the 6-inch. The hole has shown considerable shale oil for some time. This oil probably is in commercial quantity, but is shut off as cementing progresses. The oil encountered in the shale has consistently shown a lower gravity with increasing depth, leading to the conclusion that it is coming from below and increases in gravity as it filters through the shale.

South Park Oil Co. No. 1 Lemar, NE NE SE sec. 34-11s-75w. Drlg. 5,010 ft.

Pitkin County

Glenco Development Corp. No. 1 Christiana was unable to recover 15½-inch bit at 206 feet and is skidding rig 6 feet to start new hole.

Glenco Dev. Co. No. 1 Christiana, NW cor. sec. 9-10s-89w. T.D. 206 ft.; skdg. rig.

Rio Blanco County

Location for the Buford Oil Co. test of the Yellowjacket dome has been changed from C NE NE section 20-1n-91w, to C SW SW section 16-1n-91w, relatively same position on structure, but a better drilling location.

Buford Oil Co. No. 1 Govt., C SW SW sec. 16-1n-91w. Road comp.; 12½-in. on ground; M.I.M.
Texas Co. and California Co. No. 1 Unit, SW SE NW sec. 35-3n-94w. Drlg. 1,165 ft.

WYOMING

Albany County

The Wyco Oil Co., Inc., has been organized with a capital of $90,000 by C. D. Cunningham, G. R. McConnell, J. L. Shepherd, Fred Mason and John Deerskin to acquire an interest in the Hal Blakeman block in East Rock River district and operations are to be resumed on Blakeman No. 1 Chapple.

Murphy Oil Co. No. 8 Holst, C SW SE sec. 13-17n-77w. Drlg. sh. and shells 1,393 ft.
Hal Blakeman No. 1 Chapple, C NE NW sec. 33-21n-67w. T.D. 1,681 ft.; prep. to resume.
Murphy Oil Co. No. 1 Holst-Woolf, NW NW NW sec. 19-17n-76w. T.D. 4,067 ft.; tstg. Dakota through perforated 7-in.
Murphy Oil Co. No. 4 Wilson, NW NW SW sec. 18-17n-76w. Drlg. gr. sh. and Bentonite 3,383 ft.

Big Horn County

Yale Pet. Corp. No. 1 Stock-Jones, SE cor. Lot 52-56n-97w. T.D. 4,050 ft.; trying to rec. circ.
Ohio Oil Co. No. 2 Byron-Baker, SW NW sec. 23-56n-97w. Drlg. sh. 4,497 ft.
Ohio Oil Co. No. 1 Pryde, C SW SE sec. 24-56n-97w. Drlg. 4,994 ft.
Ohio Oil Co. No. 1 Smith, NE cor. Lot 61, sec. 33-56n-97w. T.D. 4,094 ft.; cmtd. 7-in. at 4,000 ft.; cd. nearly 100 ft. in sat. Madison L.
Peay Oil Co. No. 1 Denio, Tr. 43-C, sec. 15-55n-97w. T.D. 3,930 ft.; rec. lost tools.
Woods-Callahan Oil Co., Ltd., and Wyoming O. & R. Co. No. 1 Evans, NE NE NW sec. 12-44n-91w. Top of Madison 2,150 ft.; cmtd. 8⅝-in. at 2,152 ft.; drlg. plg.

Campbell County

Powder River O. & G. Co. No. 1 Rhodes, NE SE SW sec. 24-49n-74w. Rng. 15½-in. at 350 ft.; (formerly G. J. Sherin et al).

Carbon County

Ohio Oil Co. No. 12 H.&C., SE SW sec. 35-20n-78w. Loc.; (first report).
Sinclair-Wyoming Oil Co. No. 11 Wertz, SE NW NW sec. 7-26n-89w. Drlg. 3,738 ft.; 10-in. at 3,523 ft.
Ohio Oil Co. No. 1 Wyo. O. & G. Co., C SE SW sec. 29-27n-89w. Drlg. 1,303 ft.
Producers Oil Co. No. 1, CNL sec. 14-20s-88w. Drlg. 194 ft.
Ohio Oil Co.-California Co. No. 5 Cronberg-U. P., C NW NW sec. 25-21-79w. Drlg. 2,816 ft.
Ohio Oil Co. No. 1 Union Pacific, C NW NW sec. 20-21n-80w. Drlg. 1,301 ft.
Ohio Oil Co.-California Co. No. 3-A Kyle, C SW NE sec. 26-21n-79w. Drlg. 2,814 ft.
Medicine Bow Oil Co. No. 1 Hintze-Govt., C NE SE sec. 18-22n-78w. T.D. 2,347 ft.; P.B. to second Sundance at 2,140-80 ft.; shot with 40 qts.; tstg.
Ohio Oil Co.-Medicine Bow Oil Co. No. 1 U. P.-Wister, C NW SW sec. 17-22n-78w. T.D. 2,045 ft.; cmtd. 8⅝-in. at 1,952 ft. on top Sundance; rng. tb. to test.
Ohio Oil Co. No. 8 Dixon, SE NE SE sec. 34-20n-78w. T.D. 5,409 ft.; U.R. at 3,337 ft.

Converse County

Wyoming Southern Oil Co. No. 1 Lane, C NW NE sec. 27-32n-69w. Spdg. 18 ft.
Elbe Oil Ld. & Dev. Co. No. 1 Benham, NW NE sec. 5-31-70w. M.I.M.; (first report).
Tom Carney No. 1 Beaver, SE SE SW sec. 28-35n-68w. M.I.M.
Chadron-Osage Oil Co. No. 1 State, SW cor. sec. 16-32n-69w. Drlg. 3,750 ft.; S.O. at 3,690 ft.

Fremont County

Sinclair-Wyoming Oil Co. No. 2-C Muskrat, NE SW SW sec. 1-33n-92w. Drlg. L. 7,596 ft.
H. Kenyon Burch No. 1 Enos, CEL NE NE sec. 28-3n-1w. S.D.O. 970 ft.; no shows.
Ben Stewart No. 1 Darnell, NE SE sec. 26-3n-1w. Drlg. 425 ft.

Hot Springs County

Italo Pet. Corp. No. 1 Phebus-Govt., NW NW SW sec. 11-44n-98w. Bldg. rd.

Johnson County

Carter Oil Co. No. 3 Rider, C NW SE sec. 17-48n-82w. Drlg. red beds 5,819 ft.; top 5,189 ft.

Lincoln County

H. M. Eller et al No. 4 Govt., SE NW SW sec. 32-19n-116w. T.D. 401 ft.; will test S.O. in lenticular sd. at 397-401 ft.
Place Oil Co. No. 1 Davis, SE SE SE sec. 9-26n-11w Deepened to 1,156 ft.; tstg.

Natrona County

The Empire State Oil Co. No. 16, NW SW section 12-33n-83w, Poison Spider district, was completed for 20 bbls. per day in the Sundance at a total depth of 1,441 feet. The 6⅝-inch was set at 1,356 feet.

Stanolind O. & G. Co. No. 1 T.P., C NW SE sec. 26-40n-79w. Cg. 4,026 ft.
Wyalta Oil Co. No. 4 Govt., NW NW sec. 5-29n-81w. Cmtd. 6⅝-in. on top Sundance at 1,082 ft.; rng. 2-in. tbg. to test at 1,030-72 ft.
Wyalta Oil Co. No. 5 Govt., SW SW sec. 30-30n-81w. Tstg. at 1,021 ft.
Wyalta Oil Co. No. 6 Govt., NE SE NW sec. 5-29n-81w. Cmtd. 10-in. at 704 ft.; Dakota at 565-664 ft.

Niobrara County

The Continental Oil Co. has released official information concerning its No. 10 Tom Bell Cattle Co., C SW NW section 34-36n-65w, in the Lance Creek field, a test of the Minnelusa formation. It drilled through the red beds at 4,148 feet to the top of a sand in the Minnelusa at 5,284 feet and had oil sand at 5,284-5,301 feet, the total depth. On a short test through the tubing it averaged 12 bbls. per hour. Although it was a short test, the well was flowing stronger at the conclusion than at the beginning. The oil tests 43.5 gravity and is dark green in color. At the conclusion of the test coring deeper was resumed. The pay horizon is a part of the same sand which produced 1,800 bbls. per day in the Ohio Oil Co. No. 5 Leo, NW NW SW section 35-36n-65w, a mile to the east and farther out from the top of the dome. The Ohio well had saturation at 5,516-37 feet. Complete sand record is not yet available and therefore it cannot be stated whether the Continental well had saturation in the Upper Minnelusa in which the Ohio well had water. This makes three wells in Lance Creek which have encountered saturation in the Minnelusa after having water in the basal Sundance. Two of these tests are on the east flank and one on the southwestern flank.

The Argo Oil Co. No. 4 Ford, SW NW SE section 33-36n-65w, which is on a direct line west of the Continental and Ohio wells, and farther in, had water with a show of oil in the basal Sundance at 4,042-4,118 feet, and is drilling on down to the Minnelusa.

J. M. Huber Corp. No. 2 Lamb, NE SE SW sec. 27-36n 65w. Skdg. rig from No. 1 Contr. to Manning & Martin, Inc.
Continental Oil Co. No. 5-B Schuricht, C SW SW sec. 5-35n-65w. Cmtd. 13⅜-in. at 268 ft.
Ohio Oil Co. No. 2 Taylor-O.P.C.-32, NW NW SW sec. 3-35n-65w. Drlg. in r.b. 4,286 ft.
Ohio Oil Co. No. 2 Leo-O.P.C., NE NE SE sec. 35-36n-65w. R.U.R.
Ohio Oil Co. No. 1 Leo-O.P.C.-7, NW NW SE sec. 35-36n-65w. Drlg. 3,167 ft.
Ohio Oil Co. No. 10 Lamb-Acct. 2, C NE SE sec. 5-35n-65w. Drlg. 3,184 ft.
Continental Oil Co. No. 1 Leach, SW NE NE sec. 29-36n-64w. T.D. 2,738 ft.; fsg.
Argo Oil Co. No. 4 Ford, SW NW SE sec. 33-36n-65w. Drlg. r.b. 4,470 ft.
A. B. Cobb and Holly Dev. Co. No. 2 Novick, SE SE SW sec. 6-35n-65w. No report; (mystery well).
Continental Oil Co. No. 8 Otto Rohlff, SW SW SE sec. 31-36n-65w. Drlg. sh. 2,673 ft.
Continental Oil Co. No. 10 Tom Bell Cattle, C SW NW sec. 34-36n-65w. Cg. below 5,301 ft.
MacKinnie Oil & Drlg. Co. No. 2 Thompson, NW NW NE sec. 7-35n-65w. S.D. 4,064 ft.; Sundance at 4,049-64 ft.; dry.

Park County

Resolute Oil Co. No. 1 Northern Pacific, C NE NW sec. 21-57n-101w. Drlg. 1,700 ft.
Kinney-Coastal Oil Co. No. 3 Govt., SW NW NE sec. 24-56n-97w. Drlg. and cg. in Madison at 4,685 ft.; continuing S.O.&G.
Resolute Oil Co. No. 1 Govt., C NE NE sec. 20-57n-101w. Drlg. 5,900 ft.
Texas Co. No. 4 Sonners, SE cor. sec. 29-51n-100w. Drlg. r.b. 3,115 ft.
General Pet. Corp. No. 1 Govt., NW NW NW sec. 33-47-100. T.P. 6,076 ft.; P.B. to Tensleep; C.O. to 5,996 ft.; prep. to shoot.
Ohio Oil Co. No. 15 Woods O.P.C.-3, NW SE sec. 30-58n-99w (Elk Basin field). Rig; (first report).

Platte County

Dividend O. & R. Co., Inc., No. 1, CSL NW SW sec. 17-24n-66. T.D. 2,385 ft.; fsg. two strings.

Sublette County

Texas Co. No. 6-J, NE SE SE sec. 27-27n-113w. Drlg. sh. 148 ft.

Sweetwater County

Mountain Fuel Supply Co. No. 1-A Williams, NE NE sec. 5-12n-95w. T.D. 356 ft.; rec. tools; rng. 10-in. to bttm.
Mountain Fuel Supply Co. No. 1 Williams, C NE NE sec. 5-12n-95w. Ready to spud.
Mountain Fuel Supply Co. No. 1 Stone, C SW SW sec. 18-19n-103w. Cg. sdy. sh. 3,790 ft.
Mountain Fuel Supply Co. No. 1 Union Pacific, C SE NE sec. 29-15n-104w, S of Baxter Basin. Loc.

Uinta County

E. A. Ottman et al No. 1 Govt., C SE NW sec. 26-14n-119w. S.D. 280 ft. for heavier equip.

Washakie County

Wyoming O. & R. Co. No. 9 Govt., CNL NE NW sec. 31-48n-90w. Loc.
Arlton & Doyle No. 1 Govt., SW SW SE sec. 29-48n-91w S.D. 1,750 ft.

Weston County

Big Indian Oil & Dev. Co. No. 1 George, SW SE NW sec. 26-48n-64w. Drlg. 340 ft.

MONTANA

Big Horn County

Big Horn O. & G. Co. No. 31, CWL SE NW sec. 23-1s-33e. Drlg. 625 ft.
Daniels Pet. Co. No. 1 May, C SE SE sec. 13-1s-33e. Drlg. 4,120 ft.

Blaine County

Nadeau Bros. No. 1 fee, NW NW SE sec. 33-34n-17e. T.D. 765 ft.; prep. to test.

Carbon County

R. C. Tarrant No. 1 Heare, CWL NE NW sec. 14-6s-19e. Drlg. 321 ft.
Ohio Oil Co. No. 16 Kirt, C SE SE sec. 4-7s-21e. Drlg. 4,599 ft.
Geo. Muth et al No. 1, CSL SE SE sec. 23-6s-23e. Drlg. 1,575 ft.
Henderson Prod. Co. No. 1-H-11 Elk 11, SE SE NW sec. 35-9s-23e. Res. at 810 ft.

Fergus County

White Top O. & G. Co. No. 1, C NE SW sec. 35-14n-19e, Snowy Mountain dist. Drlg. 100 ft.; (first report).

Glacier County

The secretary of the interior has rejected an application of the Blackfeet Indian Council to offer for sale leases on 11,000 acres of Tribal land to the southwest of the Cut Bank field. Operators had filed protests on the ground that drilling requirements proposed would have involved the drilling of a large number of wells which would boost production above market requirements and make it necessary to prorate the field. Authority has been requested, however, for the sale of leases on 1,572 acres in Township 32n, Ranges 5 and 6w, and Township 33n, Range 6w. These tracts, of which there are 17, running from 45 to 120 acres, are in what is considered proven territory. Requirements for drilling on Indian land are being strictly enforced and two leases were cancelled the past week for failure to complete wells as agreed. One well on one of the tracts has been standing at 2,900 feet, within 100 feet of the pay, for some time.

There were no completions in Cut Bank and only two new locations.

Santa Rita O. & G. Co. No. 2 Govt., C SE SW sec. 4-32n-5w. R.U.
Montana Headlight Oil Co. No. 8 Yunck, NW SW NW sec. 1-34n-6w. Spdg. 125 ft.
Montana Headlight Oil Co. No. 7 Yunck, SW NW NW sec. 1-34n-6w. Drlg. 860 ft.; Colo. 430 ft.; 10¾-in. at 460 ft.
R. C. Tarrant No. 6 Long-Miller, C SW NW sec. 24-34n-6w. Drlg. 155 ft.
Glacier Prod. Co. No. 1 Johnson Unit, NE NE SW sec 11-33n-5w. Drlg. 300 ft.
Drumheller Oil Trust No. 1 fee, C NE SW sec. 17-34n-6w. Drlg. 1,125 ft.
Frank R. Henry et al No. 1 Walker, C SW sec. 35-36n-8w. M.I.M.
Texas Co. No. 2 State (M-455), C SW NW sec. 16-32n-4w. T.D. 2,960 ft.; cmtd. 7-in. 2,957 ft.
Glacier Prod. Co. No. 1 Long, CWL NE NW sec. 22-32n-5w. Drlg. 2,000 ft.
Glacier Prod. Co. No. 1 Morgan Unit, NE NE SE sec 33-34n-5w. Est. 3,000,000 ft. gas at 2,614-25 ft.; rng. 7-in.
Hannah-Porter No. 4 All.-130, CWL SW SE sec. 6-32n-5w. Drlg. 2,515 ft.
Santa Rita O. & G. Co. No. 1 Lahr, C SE SE sec. 27-33n-5w. Cmtd. 7-in. at 2,896 ft.
Glacier Prod. Co. No. 1 Barrington, 820 ft. from N line and 2,640 ft. from W line, sec. 19-33n-5w. Cmtd. 7-in. at 2,898 ft.
Wm. Hanlon No. 3 All.-128, CWL SW NE sec. 12-32n-6w. Rng. 7-in. at 3,014 ft.
Texas Co. No. 2 Tweedy, C NE NW sec. 21-35n-6w. T.D. 2,936 ft.; cmtd. 7-in. at 2,912 ft.
A. B. Cobb No. 5 Walburger, C NE SE sec. 35-35n-6w. Ready to spd.
Grant Oil Co. No. 1 Rueffen, C SW SE sec. 5-32n-5w. Drlg. 2,230 ft.
K. D. Pardee No. 1 Corrigeaux, NE NE SE sec. 35-34n-6w. Cmtd. 7-in. at 2,960 ft.; S.D.
A. R. Pardee No. 1 Anderson, C SE SW sec. 31-32n-5w. Drlg. 2,800 ft.

Judith Basin County

Fletcher E. Hunt No. 3, NW SE NE sec. 30-14n-15e. T.D. 1,600 ft.; cmtd. 6⅝-in.; top of Penn.

Musselshell County

R. C. Tarrant and Johnson No. 24-A Govt., SW NW NW

ONLY 4 CHASER DIES INSTEAD OF 16

This RIDGID No. 65R threads 1" to 2" pipe—without changing dies perfect accurate threads. One set of 4 dies—no bother changing, forget the other 12 you don't need. You'll like this RIDGID No. 65R. Write for folder, or see it at your supply store.

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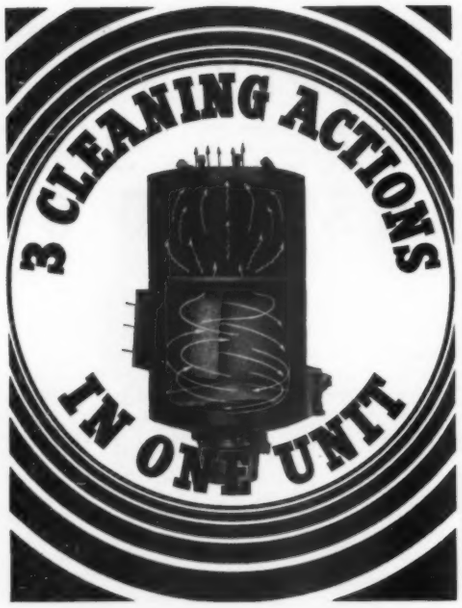

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AIR CLEANERS
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What is more, Vortox maintains its high efficiency indefinitely because the dust is trapped in the oil below the baffle plate, which prevents it from returning to the centrifugal chamber or the filter element. The incoming air does not pass through dust choked filters which become constantly less and less efficient and which require frequent changing or cleaning. Removal of dust and a change of oil at regular intervals is the only maintenance Vortox requires.

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VORTOX MFG. CO., CLAREMONT, CALIF.

VORTOX
OIL TYPE SELF-WASHING
AIR CLEANER

sec. 25-11n-24e. T.D. 1,050 ft.; U.R. 8¼-in. to carry.

Petroleum County

H. C. Rowland No. 1 Kalispel, NE NE SE sec. 35-14n-25e. Drlg. 819 ft.
O. B. Canfield No. 1 Govt., CEL SE NE sec. 21-17n-24e. Rng. 3-in. to set at 750 ft.

Pondera County

Kirk Oil Co. No. 1 Kellogg, SE NE NE sec. 31-28n-4w. T.D. 2,296 ft.; dropped 1,100 ft. tbg. while prep. to acd.

Roosevelt County

John W. Schmidt et al No. 1 Freu, NW NW NE sec. 21-28n-50w. Drlg. 700 ft.

Toole County

Eight completions, of which two were dry holes, and seven new operations were reported in the Kevin-Sunburst field.

The Superior Petroleum Co. No. 6 Government, CSL SW NW section 12-35n-3w, swabbed 20 bbls. per day from the Sunburst at 1,503-33 feet.

G. C. Hoyt No. 4 McGowan, C NE NE section 8-35n-2w, made 27 bbls. in three days from the contact at 1,708-10 feet.

A. E. Crumley No. 1 Government, NW NE SW section 27-36n-3w, had 1,700 feet of sulfur water in the contact at 2,035-65 feet and was plugged and abandoned.

The Hardrock Oil Co. No. 1 Government, SE NW NW section 11-35n-3w, made 60 bbls. per day from the contact at 1,842-43 feet after acidizing with 750 gallons

The Lamont Petroleum Co. No. 3 Van Note, CNL NW NW section 30-35n-2w, made 30 bbls. of oil and 30 bbls. of water per day from the contact at 1,511-16 feet after acidizing with 500 gallons.

Leo Sweeny No. 5 Davis, NW NE SW section 27-35n-3w, was plugged and abandoned at 1,663 feet.

The Treasure State Oil Co. No. 4 Shaw, SW NE NE section 35-36n-2w, made 15 bbls. per day from the Sunburst at 1,551-71 feet.

The Texas Co. No. 11 Bruins, SE cor. section 9-35n-2w, pumped 97 bbls. the first 24 hours from the contact at 1,592-1,601 feet after acidizing.

C. T. Oien No. 7 Engemoen, C NW NW sec. 14-35n-2w. Drlg. 500 ft.
C. L. Tomlison No. 1 Davidson, NW NE SE sec. 28-35n-3w. Spdg. 75 ft.
A. E. Crumley No. 2 Govt., SW NE NE sec. 35-36n-2w. Drlg. 280 ft.
McKnight & Pinkney No. 5 Seabrook, NW NE SW sec. 19-35n-2w. Drlg. 900 ft.
Lion Prod. Co. No. 3 Haugen, SE NE SE sec. 11-35n-3w. Drlg. 850 ft.
E. O. Reickhoff No. 3 Baum, SW SW SE sec. 3-35n-3w. S.D. 110 ft.
Big West Oil Co. No. 1 Jackson, C SW NE sec. 30-35n-3w. Drlg. 700 ft.
Texas Co. No. 7 Swears, SW cor. sec. 9-35n-2w. Cmtd. 7-in. at 1,575 ft.
California Co. No. 7 Neumann, NW NW NE sec. 23-35n-2w. Loc.
California Co. No. 6 Neumann, NE NW NE sec. 23-35n-2e. Loc.
McCurdy No. 1 Hollowell, C SE SW sec. 1-35n-3w. Drlg. 700 ft.
Larson & Ness No. 1 Horner, C NW NE sec. 30-35n-3w. Drlg. 1,510 ft.
Big West Oil Co. No. 5 McDonald, NE SE SW sec. 19-35n-2w. T.D. 1,524 ft.; 5 B.P.D.; acd.; stdg.
Burke & Kluth No. 1 Overby, NW NW NW sec. 30-34n-2w. Drlg. 1,539 ft.
Neil Spencer No. 1 Barkulo, C NW NW sec. 25-35n-4w. S.D. 25 ft.
Consolidated Gas Co. No. 1 Hugi, NE NE NW sec. 11-35n-3w. T.D. 1,743 ft.; will shoot.
Capitol Oil Co. No. 1 Pace, C SE SW sec. 27-36n-1w. S.D. 2,008 ft.
S. V. Day No. 3 Halter, NE NE NE sec. 17-35n-2w. T.D. 1,626 ft.; contact 1,605 ft.; will acd.
Watson et al No. 2 Leach, SE NE NE sec. 31-35n-3w. S.D. 1,796 ft.
Bryant Bros. No. 1 Lashbaugh, NE SW NW sec. 34-25n-2w. T.D. 850 ft.; R.U. heavier mach. to resume.
Ogden-Kevin Oil Co. No. 7 Zachot, SE SW NW sec. 20-35n-1w. S.D. 900 ft.

Outside Kevin-Sunburst

Model Oils, Inc., No. 1 Fey, NE SW sec. 5-37-3e. Drlg. 1,000 ft.

Yellowstone County

Western Dakota Oil Co. No. 1 Fox, CEL NW NE sec. 14-2n-23e. Drlg. 1,021 ft.; second Frontier; S.O. 900 ft.
Broadview Dome Oil Co. No. 1, NE NE SW sec. 18-3n-23e. Drlg. 1,100 ft.

UTAH

Carbon County

Kelly Young No. 1, NE NE SE sec. 20-14s-10e. Drlg. 580 ft. (C.D.); consid. gas in Ferron sd. in Mancos. sh.

Daggett County

Mountain Fuel Supply Co. No. 1 Lauzier, CNL NW NW sec. 27-3n-24e. T.D. 5,955 ft.; P.B. to 5,896 ft.; rng. 6⅝-in.
Mountain Fuel Supply Co. No. 1 Smith, C SW NE sec. 30-3n-24e. Rgng. drk.; (first report).

Grand County

Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 33-22s-22e. S.D. 6,715 ft.; M.I. heavier rot. equip.
Columbia Crude Corp. No. 1 Rath, NW SW SE sec. 12-25s-20e. S.D. 2,265 ft.; to erect standard drk.
Cane Creek Oil Co. No. 1 Govt., NW SW sec. 31-26n-21e. Drlg. 245 ft.

NEBRASKA

Sioux County

J. M. Huber Corp. and United Producers, Inc., No. 1 Morgan, C SW SW sec. 32-35n-56e. Drlg. 3,000 ft.

Dawes County

Stephens Oil Corp. No. 1 Palmer, C NW SW sec. 1-33n-50w. S.D. indef. 2,531 ft.

Keith County

Twentieth Century Oil Co. No. 1 Stuken, C NW NW sec. 21-14n-37w. S.D. 110 ft.; indef.

Lincoln County

J. D. Cook and others, formerly carried as Smith & Wright, are preparing to make a deep test out of their No. 1 Hansen on the North Platte structure, where they have a large block, and are pulling out cable tools at 1,802 feet to install a 92-foot tower and rotary tools. This test will be carried to the granite. Joe Cook was one of the pioneers in the Wyoming field. He and his associates are looking for their own production for the Denver Refining Co., which they control, and which built a refinery in Denver two years ago. This refinery operated on Wyoming crude for a while and then, they state, their supply from a major company was cut off. Their purpose is to obtain their own supply of crude and resume operations at the Denver plant.

J. D. Cook et al No. 1 Hansen, C SW NW sec. 24-15n-31w. T.D. 1,802 ft.; chg. to rot. tools. R.U.

Jefferson County

L. R. Page et al No. 1 Bonham, C SE SE sec. 1-1n-1e.

East Texas Fields

(Continued from Page 78)

3,645-46 feet, 27 bbls. in 10 hours on pump. Ohio Oil Co. No. 23 Graham, 3,628-48 feet, 2 bbls. in 15 minutes. Retsel Drilling Co. No. 6 Brown, 3,690-3,723 feet, 60 bbls. per hour. Sonbar Oil Co. No. 15 Finney, 3,620-85 feet, 60 bbls. per hour. Stanolind Oil & Gas Co. No. 4 Grissom, 3,697-99 feet, 50 bbls. per hour. Texokana Oil Co. No. 6 Wright, 3,676-78 feet, 20 bbls. in 30 minutes. Wheelis Oil Corp. No. 15 Patterson, 3,707-08 feet, 20 bbls. in 20 minutes.

Smith County

H. L. Hunt No. 27-A Fair, 3,653-63 feet, 23 bbls. in 10 minutes.

Upshur County

Humble Oil & Refining Co. No. 10 Edwards, 3,590-96 feet, 60 bbls. per hour; No. 37 Edwards, 3,567-3,609 feet, 56 bbls. per hour. E. C. Johnson No. 5 Bowie, 3,615-18 feet, 20 bbls. in 30 minutes. Magnolia Petroleum Co. No. 28 Hampton, 3,695-3,704 feet, 60 bbls. per hour. Miller and others No. 5 Nickholson, 3,624-26 feet, 100 bbls. in 75 minutes. P. H. Pewitt No. 8 Jones, 3,818-20 feet, 20 bbls. per hour. Sklar Oil Co. No. 3 Smith, 3,695-96 feet, 20 bbls. per day on pump. Tide Water and others No. 50-B Flewellen, 3,698-3,715 feet, 9 bbls. in 10 minutes. United East & West Oil Co. No. 9 Shelton, 3,708-18 feet, 20 bbls. in 30 minutes.

California Fields

(Continued from Page 80)

ing in the El Segundo field along with normal development at Elk Hills and other settled fields has resulted in a consistent increase in production. In the Elk Hills field the company has spudded in No. 1-H-A Crampton in section 1-31-24 and is rigging up No. 8-H-A in section 1-31-24. In section 7-31-25, rather well out on the edge of the structure, the company is building rig for No. 1-A Buena Vista.

Kern River

Out on the west front of the Kern River field Republic Petroleum Co. has completed No. 18 Strassburger in section 24-28-27 pumping 242 bbls. of 15.8-gravity oil per day from 1,920 feet. Republic Petroleum has two additional rigs standing on the Strassburger lease and in addition to building another has completed a new rig for No. 3 Cal. Tech. in section 24-28-27. Standard Oil Co. has topped the pay in No. 6 Ward fee in section 6-28-27 at 1,775 feet and this potential producer should be tanking oil within a few days. No. 1 Hansco of Associated Holding Corp. in section 11-28-27 has been completed pumping 65 bbls. of 14.5-gravity oil cutting 5 per cent per day from 1,960 feet. In the Fruitvale field of Kern County Mohawk Oil Co. finished a small producer when No. 23-4 Kern County Land in section 23-29-27 was brought in pumping 39 bbls. of 18.1-gravity oil per day from 3,565 feet after plugging back the hole from 3,705 feet.

In the Midway-Sunset field Chanslor Canfield Midway Oil Co. completed No. 32 in section 21-32-23 at 2,700 feet and this new well was brought in pumping 128 bbls. of 15.5-gravity oil cutting 17 per cent per day. Immediately upon completion of this well, the crew was moved

over to No. 43 in the same section and preparations were started to begin drilling operations. Drilling operations in the Midway-Sunset field are slowing down somewhat, but are expected to increase. Standard Oil Co. recently has completed several excellent producers. The company is rigging up rotary tools on No. 37-23-D in section 23-32-24 and No. 78-33-D in section 33-32-24. In the Mount Poso field, Shell Oil Co. has completed No. 21 Security pumping 336 bbls. of 16.2-gravity oil per day from 1,832 feet, but has not yet started to make a potential test. On the Vedder Bowles lease, Ring Oil Co. completed No. 3 pumping 341 bbls. of 16.3-gravity oil daily from 1,753 feet after the hole had been finished with 88 feet of 7-inch liner, including 43 feet of perforated. At last reports the production of this well was increasing and might reach 400 bbls. per day.

Rocky Mountain Runs

Production estimates for week ended July 31:

	Bbls.
WYOMING	
Salt Creek	16,000
Big Muddy	1,380
Badger Basin	210
Black Mountain	200
Dallas Derby	570
Dutton Creek	60
Elk Basin	30
Frannie	820
Garland	2,440
Grass Creek	830
Hamilton dome	2,980
Hidden dome	380
Huuson	290
LaBarge	990
Lance Creek	10,520
Lost Soldier	1,400
Medicine Bow	3,040
Midway	20
Oregon Basin	4,450
Osage	830
Pilto Butte	20
Quealy dome	840
Rock River	2,000
South Casper	440
Poison Spider	320
Teapot	20
Wertz	340
Waugh dome	270
Total Wyoming	51,690
MONTANA	
Border	180
Cat Creek	620
Cut Bank	10,500
Dry Creek	20
Kevin-Sunburst	5,100
Lake Basin	20
Pondera	1,360
Total Montana	17,800
COLORADO	
Florence	120
Fort Collins and Wellington	270
Iles dome	2,820
Moffat	390
Orchard	20
Rangely	80
Tow Creek	160
Price	1,140
Total Colorado	5,000
NEW MEXICO	
Cooper	6,400
Eaves	1,120
Eunice	31,600
Hardy	1,350
Hobbs	20,100
Jal	1,300
Langlie	1,770
Lynch	820
Lynn	260
Mattix	1,700
Monument	33,740
North Lynch	60
Penrose	3,080
Rhoades	50
Skelly	1,440
South Eunice	1,620
Vacuum	10
Artesia-Maljamar	6,810
Getty	200
Hogback	200
Rattlesnake	690
Table Mesa	90
Total New Mexico	114,410
Total Rocky Mountain region	188,900

Gulf Coast Fields

(Continued from Page 69)

Frazier No. 1 Hanchey which opened production 2½ miles southwest of the discovery well, Woodley Petroleum Co. No. 1 McMurtay is bottomed in sandy shale showing oil at 7,626 feet and 7-inch casing has been cemented at 7,575 feet. A Schlumberger survey showed 6½ ohms resistivity and 40 millivolts porosity at 7,583-95 feet. Location is being cleared for Shell Petroleum Corp. No. 1 Cessna, a northeast offset in the H. B. Johnston Survey.

In the Palacios field, Matagorda County, Glenn H. McCarthy was preparing to make a drill stem test at No. 1 William Rhols, 1,400 feet southwest of the discovery well, after coring sand and sandy shale with an oil odor at 7,842-59 feet. Offsetting the discovery well, Sun Oil Co. No. 1 Bay Shore farms is bottomed at 8,700 feet and the hole is being reamed. No further shows have been reported since a 4-foot recovery at 8,580-90 feet showed oil. It is reported that a protection string of casing will be cemented and the hole carried much deeper.

Limits Further Defined

The production limits of the southeast extension area of the Segno field were further defined by Humble Oil & Refining Co. No. 6-B Kirby Lumber Co., several hundred feet south of production. On a 13-minute drill stem test at 5,347-66 feet, it showed 1,400 feet of salt water and the hole will be cored deeper. This is the second dry hole completed within two weeks.

Northeast of Bonney, Brazoria County, Jack Frazier has made location for No. 1 S. W. Russell, a wildcat in the J. M. Allen Survey.

In the Louisiana Coast, a second drill stem test of Amerada Petroleum Petroleum Corp. No. 1 State assured the opening of commercial production for the Black Prince Island Prospect in St. Charles Parish. Salt water which appeared last week on a drill stem test at 6,820-30 feet came from a bad cement job, and after recementing, a 12-minute drill stem test at 6,820-30 feet showed 1,800 feet of 35-gravity oil, 200 feet of sand and 140 pounds of pressure. Screen and liner are being run and a production test was expected to be made. The prospect was proven a salt dome several weeks ago after salt was encountered at 8,632 feet. The well was drilled on a geophysical prospect of several thousand acres held jointly with the Louisiana Land & Exploration Co., centering in the southern part of the parish in section 13-15s-20e.

Plugged Back After Fire

Texas Co. No. 1 Bayou Sale, St. Mary Parish, which reached a depth of 12,261 feet, where it blew out and caught fire several weeks ago, was plugged back, sidetracked and redrilled to a depth of 11,324 feet. Seven-inch casing was cemented at 10,975 feet and on a drill stem test through perforated casing at 10,870-90 feet it showed 100 bbls. of 38-gravity oil and several hundred feet of salt water. The perforations have been squeezed off with cement and another test is being made at a higher level.

Humble Oil & Refining Co. and Texas Gulf Sulphur Co. and others joint operation at the Potash Prospect, Plaquemines Parish, has resulted in the discovery of a shallow salt dome. The company's No. 1 Orleans Levee Board in section 11-18s-15e, topped cap rock at 804 feet and was abandoned. While this prospect has been known for several years, this is the first activity started. Regardless of the outcome of the two other wells now drilling further development around the flanks is expected.

At the Abbeville field, Vermilion Parish, Continental Oil Co. No. 1 Brookshire, a half-mile east of the discovery well, is drilling below 10,206 feet with no shows reported. It is scheduled to be drilled to the 12,000-foot horizon, where the discovery well encountered a high-pressure sand showing oil and gas, but due to mechanical trouble no test was ever made.

The eighteenth producer for the southwest flank of the old Jennings field, Acadia Parish, was completed by W. T. Burton No. 1 Roboria which flowed 550 bbls. per day through a quarter-inch choke. The hole is bottomed at 7,093 feet with production from oil sand at 6,918-7,090 feet. Location is in section 42-9s-2w.

Mattoon's Oil Men's Picnic

MATTOON, Ill., Aug. 2.—The Board of Commerce of Mattoon will give a picnic and dance Saturday, August 7, to the oil men who have invaded the Central Coal Basin area, many of whom are making their headquarters in this city. The party, which is expected to have a very large attendance, is given in appreciation of the new prosperity that has come to Mattoon through the discovery of oil in the basin and the consequent big drilling campaign in a score of counties in the central and southern parts of the state.

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Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ontario, July 31.—In the southwest extension of Turner Valley, Monarch Royalties No. 1, LSD 9, section 20-18-2w5, finished 469 feet in the Madison limestone at 7,007 feet. Gas from Highwood-Sarcee Oils No. 2, under 300 pounds pressure, was utilized to clear the hole of rotary mud. When partly clear the well started blowing in by heads, spurting crude and rotary fluid over the derrick. It was connected with the separator and made around 90 bbls. in an hour, partly fluid. After natural production had settled, the well was acidized, and the settled production after acid treatment is estimated better than 1,000 bbls. a day.

Location is west and south of most of the large crude producers on the west flank, being over a mile south of Turner Valley Royalties No. 1, and a quarter mile west of B. & B. Co. No. 1 Foundation Royalties No. 1 is a half mile southeast. It extends the proven field about a quarter mile west, and strengthens the probability of production in a number of wells drilling in that direction.

It is the deepest crude producer on the west flank except Royalite No. 4 Sterling Pacific, which finished at 7,184 feet. Drilling started in the Belly River formation, the log showing the Benton at 2,330 feet and the cardium sandstone marker at 4,200 feet. The Benton-Blairmore contact was met at 5,130, the coal marker at 5,780, the Blairmore-Kootenay contact at 6,260 and the Kootenay-Fernie at 6,390, with the belemites at 6,500 feet. The lime was encountered at 6,538 feet, compared with 6,734 feet in No. 4 Sterling Pacific. Early samples of crude tested 41.5 gravity, somewhat heavier than crudes encountered farther east and higher on structure. There was considerable gas. The well was the first in Turner Valley to be given acid treatment immediately on completion. The well was sponsored by Anglo Canadian Development & Holding Co. of Calgary, headed by F. P. Byrne, and drilling contract was handled by Clarence Snyder and Hilary Head, rotary tools being used.

On the west flank of Turner Valley, Royalite Oil Co. No. 5 Sterling Pacific, LSD 12, section 33-18-2w5, is below 6,857 feet, more than 247 feet in the limestone, and will probably be the next completion. Some good shows have been met in the lime.

Richland Royalties No. 3, LSD 14, section 28-18-2w5, which got the Madison at 5,607 feet, encountered strong flow of wet gas around 5,777 feet and is deepening. Large production is expected around 6,000 feet.

West Side Drilling

In section 32-18-2w5, Vantage Oils, Ltd., of Vancouver, British Columbia, is preparing to drill in LSD 12, on acreage of Roxana Petroleums, Ltd.

Okalta Test Logs High

7 ⅛ miles west of the crude oil line, Okalta Oils No. 6, LSD 3, section 30-18-2w5, is in the Lower Benton formation below 205 feet after drilling through what is believed to be the cardium sandstone, and cementing 18⅝-inch casing to shut off surface water. In wells in the crude oil area on the Turner Valley west flank, the cardium has been found as deep as 4,000 feet or more; indicating the formations rise again to the west, and that the Okalta location is probably on a parallel fold. If the Okalta well logs with Turner Valley drilling, it should get the producing horizon in the lime around 3,000 feet.

Turner Valley Acidizing

In South Turner Valley, Century Royalties No. 1, LSD 14, section 28-18-2w5, has been cleaned out, increasing production from 100 to around 125 bbls. Tubing has been run and the well is being acidized with 5,000 gallons. Sovereign Royalties No. 1, LSD 14, section 21-18-2w5, increased wet gas flow 2,000,000 feet a day by treatment, with some increase in naphtha recovery.

In the West Central area, Miracle Oils No. 2, section 5-19-2w5, was acidized, increasing production from 60 to 125 bbls. a day.

To Test South Extension

C. T. Fillan and W. S. Henderson of Calgary are arranging for a test of acreage in section 33-17-2w5, representing a potential southern extension of the Turner Valley producing area. The nearest producer to the north is Westside Royalties No. 1, LSD 3, section 21-18-2w5, approximately 3 miles, but a test is drilling for National Petroleum Corp. in section 9-18-2w5, about 1½ miles north and locations have been made immediately north in section 4-18-2w5. The Fillan & Henderson acreage has been reported on by Geologist Russell V. Johnson of Calgary. The crest of the Turner Valley anticline is exposed along Pekisko Creek, in the southeast corner of section 33, and appears to be quite unbroken by faulting or crumpling of the surface beds, and there is no indication of major faulting. Farther north along the Highwood River the surface is broken, but it is believed the unbroken structure resumes to the south.

East Side Drilling

On the Aldersyde structure, east of Turner Valley, Ranchmen's Gas & Oil Co. No. 1, LSD 16, section 13-20-29w4, is below 7,195 feet with continued small oil shows in a hard formation. Casing is being pulled from Sam Drumheller Oil Co. No. 1, same section, started in 1921 and abandoned at 1,000 feet with a small gas production.

On the New Valley structure, northeast of Turner Valley, McLeod Oil Co. No. 1, LSD 4, section 6-21-2w5, is below 8,275 feet in a sandy formation heavily impregnated with dark crude.

On the Moose dome, Moose Oils No. 2, LSD 8, section 29-22-6w5, has resumed with 16-inch hole from 1,335 feet. Four small gas shows have been struck between 1,063 and 1,335 feet, making a flare 10 to 15 feet high.

In the Pincher Creek district, Weymarn Petroleums No. 2, LSD 5, section 7-6-1w5, has resumed from 5,960 feet, cleaning and deepening before acidizing. Two more shows of oil and gas have been encountered.

Taber Field

In the Taber field, southern Alberta, Plains Petroleum Corp. No. 1, LSD 14, section 29-9-17w4, which had some production in the Clancey sand, a stray sand at 3,190 feet, has been deepened to test the Ellis sand. The Clancey sand extended from 3,190 to 3,285 feet. At 3,300 feet a limestone band was penetrated and at 3,302 feet a sand with heavy oil saturation was met, continuing to 3,310 feet. Samples indicate heavier oil saturation than in the Clancey sand. From 3,300 feet the hole has been plugged and 4½-inch casing cemented there, preparatory to drilling into production.

Plains No. 2, LSD 11, section 25-9-17w4, is rigging derrick to replace the one destroyed by fire, and will deepen from 2,300 feet.

Border Fields

In the western extension of the Red Coulee field, 17 miles west of Coutts and 30 miles north of the Cut Bank field, Home Oil Co. No. 1 Coutts, LSD 7, section 1-1-18w4, has spudded.

Ontario Drilling

In the DeClute field, Kent County, Ontario, Union Gas Co. No. 32, SW quarter Lot 142, North Talbot Road, Raleigh Township, finished at 1,532 feet as the largest gasser yet drilled in this field. Initial open flow was over 10,000,000 feet a day.

In the Brownsville field, Oxford County, Western Ontario Natural Gas Co. (W. J. Aikens) No. 5, SW quarter Lot 24, Concession 11, Dereham Township, finished around 935 feet with initial open flow of 3,726,000 feet a day. Lee W. Adams and H. C. Truemner No. 2, Humphrey farm, W half Lot 6, Concession 11, finished at about 925 feet with 1,000,000 feet a day. Patterson & Treleaven No. 1, Scanlon farm, Lot 25, Concession 11, finished around 930 feet with 3,725,000 feet a day. Arch Treleaven No. 4, Lot 22, Concession 12, finished last March with 710,000 feet initial flow at 915 feet, was deepened 10 feet, increasing the flow to 1,980,000 feet a day.

Rodessa Lease Sale

Secretary Ickes has authorized the sale of oil and gas leases on lands in the Rodessa field, Caddo Parish, Louisiana, comprising unit No. 3, 28.93 acres; unit No. 4, 27.96 acres; unit No. 5, 138.13 acres; and unit No. 6, 39.95 acres. The supervisor of oil and gas operations, Geological Survey, will open the sale at noon September 3 in the Post Office Building, Shreveport.

Drilling Contractors

(Continued from Page 77)

counties; 64 tracts of varying size in Copano, St. Charles, Aransas and Redfish bays in Nueces and Aransas counties, and 83 tracts in the Tres Palacios River and bay and Matagorda and Turtle bays in Matagorda County.

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WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Shell Oil, No. 1-25 Capitan, Santa Barbara Co.	32- 5-30	2,318	sd. sh. drlg.
Texas Co., No. 1 Careaga, Santa Barbara Co.	1- 4-31	1,781	sd. sh. drlg.
Hancock-Bush, No. 1-R Santa Maria, Santa Barbara	25-10-34	3,874	cmtd. 3,864
Macrate, A. N., No. 2-F Santa Maria, Santa Barbara	26-10-34	1,992	sd. sh. drlg.
Pet. Prop., Inc., No. 1-R Santa Maria, Santa Barbara	19-10-33	693	sd. sh. drlg.
Sed Oil, No. 1 Mills, Santa Maria, Santa Barbara Co.	27-10-34	2,000	cmtd. 775
Union Oil, No. 1-19 Enos, Santa Maria, Santa Barbara	23-10-34	2,796	bailing
Union Oil, No. 1 Cook, Santa Maria, Santa Barbara	30-10-33	5,560	br. sh. drlg.
Union Oil, No. 1-B Santa Maria, Santa Barbara Co.	21-10-34	5,255	br. sh. drlg.
Union Oil, No. 19 Orcutt, Santa Barbara Co.	26- 9-34	4,278	O.S. drlg.
Pac. Western Oil, No. 4 Santa Maria, Santa Barbara	21-10-34	2,755	sd. sh. drlg.
Rice Ranch Oil, No. 4 Orcutt, Santa Barbara Co.	23- 9-34	4,330	P.B. 3,730
So. Cal. Drlg., No. 1-H Santa Maria, Santa Barbara Co.	9- 9-33	5,003	bailing
101 Oil, No. 1 Pt. Concepcion, Santa Barbara Co.	35- 5-33	1,076	sd. sh. drlg.
Tide Water A. O., No. 1-L Santa Rita, Santa Barbara	3- 6-33	1,531	hd. sd. drlg.
Hancock Oil, No. 2 Los Alamos, Santa Barbara Co.	6- 7-32	4,100	hd. sh. drlg.
Arnold Oil, No. 2 Los Alamos, Santa Barbara Co.	8- 8-33	5,456	reaming
Del Mar Oil, No. 1 Summerland, Santa Barbara Co.	16- 4-26	2,740	hd. sd. drlg.
Pet. Securities, No. 1 Calumet, Shiells, Ventura Co.	3- 3-19	4,452	rd. sh. drlg.
Texas Co., No. 129 Shiells, Ventura Co.	4- 3-19	4,812	redrlg. 3,450
Texas Co., No. 133 Shiells, Ventura Co.	4- 3-19	3,170	sd. sh. drlg.
Union Oil, No. 16 Bardsdale, Ventura Co.	12- 3-29	5,455	sd. sh. drlg.
Texas Co., No. 1-P Camarillo, Ventura Co.	20- 2-21	1,252	reaming
Richfield Oil, No. 1 McFarland, Camarillo, Ventura	13- 2-21	318	sd. sh. drlg.
Condor Oil, No. 1 Sespe, Ventura Co.	6- 4-19	2,031	completing
Ivers, H. A., No. 14 Star, Sespe, Ventura Co.	1- 4-20	1,220	sd. sh. drlg.
Topa Topa Oil, No. 2 Sespe, Ventura Co.	33- 5-19	3,800	O.S. drlg.
Speik Oil, No. 2 Sespe, Ventura Co.	33- 5-19	2,867	sd. sh. drlg.
Colima Oil, No. 2 Sespe, Ventura Co.	25- 5-19	3,350	swabbing
Pac. Western Oil, No. 9 Temescal, Ventura Co.	3- 4-18	2,755	hd. sh. drlg.
Vai, Giovani, No. 1 Ojai, Ventura Co.	4- 4-21	830	hd. sh. drlg.
C. C. M. Oil, No. 2 Padre Canyon, Ventura Co.	23- 3-24	7,025	O.S. drlg.
C. C. M. Oil, No. 14 Rincon, Ventura Co.	17- 3-24	4,377	flow. 1,120 b.d.
C. C. M. Oil, No. 15 Rincon, Ventura Co.	17- 3-24	4,245	O.S. drlg.
Richfield Oil, No. 2 Hobson, Rincon, Ventura Co.	8- 3-24	4,712	coring
Rincon Pet., No. 1 Shudde, Rincon, Ventura Co.	tideland	2,109	will deepen
Oxnard Oil, No. 1 Oxnard, Ventura Co.	10- 1-22	1,019	cmtd. 1,019
Tide Water A. O., No. 28 V.L.W., Ventura, Ventura	26- 3-23	1,977	sd. sh. drlg.
Tide Water A. O., No. 31 V.L.W., Ventura, Ventura	24- 3-23	6,931	sd. sh. drlg.
Tide Water A. O., No. 61 Lloyd, Ventura, Ventura	27- 3-23	4,554	sd. sh. drlg.
Tide Water A. O., No. 62 Lloyd, Ventura, Ventura	27- 3-23	5,755	sd. sh. drlg.
Tide Water A. O., No. 137 Lloyd, Ventura, Ventura	27- 3-23	8,670	O.S. drlg.
Tide Water A. O., No. 18 Hartman, Ventura, Ventura	22- 3-23	5,400	sd. sh. drlg.
Shell Oil, No. 91 Taylor, Ventura, Ventura Co.	30- 3-23	8,717	flow. 2,958 b.d.
Shell Oil, No. 35 Gosnell, Ventura, Ventura Co.	28- 3-23	8,950	redrlg. 8,500
General Pet., No. 17 Barnard, Ventura, Ventura Co.	23- 3-23	8,176	fish. D.P.
Den Petroleum Co., No. 1 Devils Den, Kern Co.	20-25-19	4,365	br. sh. drlg.
Tide Water A. O., No. 12-D Lost Hills, Kern Co.	11-26-20	1,552	sd. sh. drlg.
Argo Pet., No. 1-F Lost Hills, Kern Co.	11-26-20	838	cmtd. 690
Amerada Pet., No. 1 Blackwell Corner, Kern Co.	17-26-19	2,670	pump. 10 b.d.
East Puente Oil, No. 24-11 McKittrick, Kern Co.	11-30-21	921	sd. sh. drlg.
Continental Oil, No. 2 Wasco, Kern Co.	8-27-24	7,691	sd. sh. drlg.
Seaboard Oil, No. 1 Wasco, Kern Co.	26-27-24	10,243	idle
Belridge Oil, No. 61-26 North Belridge, Kern Co.	26-27-20	5,471	br. sh. drlg.
Belridge Oil, No. 28-1 North Belridge, Kern Co.	1-28-20	5,976	br. sh. drlg.
Continental Oil, No. 9 North Belridge, Kern Co.	36-27-20	8,465	cleaning out
Tide Water A. O., No. 6 North Belridge, Kern Co.	34-27-20	7,871	hd. sh. drlg.
Texas Co., No. 1 Martin, North Belridge, Kern Co.	22-27-20	7,260	br. sh. drlg.
Santa Ynez Oil, No. 1 Temblor, Kern Co.	36-29-20	1,552	idle
Shell Oil, No. 1-2 Olcese, Pyramid, Kern Co.	16-28-29	2,204	sd. sh. drlg.
Honolulu Oil, No. 35 Round Mountain, Kern Co.	20-28-29	1,941	C.P. 1,706
Fremont Oil, No. 1 Olcese, Round Mountain, Kern Co.	26-28-29	1,133	sd. sh. drlg.
Tavis, J. J., No. 1 Round Mountain, Kern Co.	4-29-29	1,415	sd. sh. drlg.
Cal-Western Oil, No. 3 C.C., Round Mountain, Kern	12-28-28	1,171	sd. sh. drlg.
Republic Pet. Co., No. 18-S Kern Front, Kern Co.	24-28-27	1,920	pump. 238 b.d.
McDonald & Dearin, No. 4 Carrie, Kern Front, Kern	10-28-27	2,141	P.B. 2,082
Standard Oil, No. 6 Ward, Kern Front, Kern Co.	24-28-27	1,775	O.S. drlg.
Whittier, M. H., No. 5 Canley, Kern Front, Kern Co.	16-28-27	2,470	sd. sh. drlg.
Associated Hold., No. 1-H Kern Front, Kern Co.	11-28-27	1,960	pump. 58 b.d.
Oils, Inc., of Calif., No. 7-2 Kern Front, Kern Co.	13-28-27	1,289	P.B. 1,247
Oils, Inc., of Calif., No. 7-3 Kern Front, Kern Co.	13-28-27	1,289	cmtd. 1,249
California Star Oil, No. 2-80 Kern Front, Kern Co.	22-28-27	2,316	sd. sh. drlg.
Texas Co., No. 4 Lehman, Kern Front, Kern Co.	23-28-27	1,964	will deepen
Shell Oil, No. 1 Bellview, Kern Co.	31-29-27	7,520	sd. sh. drlg.
Sleeper Ridge Oil, No. 1 Kern River, Kern Co.	15-29-28	874	sd. sh. drlg.
Palmer & Luse, No. 1 Kern River, Kern Co.	10-28-28	2,285	sd. sh. drlg.
McKeon, Inc., No. 1-C Kern River, Kern Co.	32-28-28	1,170	idle
Ring Oil, No. 1 Bohen, Mount Poso, Kern Co.	32-26-28	993	sd. sh. drlg.
Ring Oil, No. 3 Vedder-Bowles, Mount Poso, Kern Co.	29-26-28	1,753	pump. 349 b.d.
C. C. M. Oil, No. 1 Carter, Mount Poso, Kern Co.	7-27-27	5,420	dry; abd.
Framac Oil, No. 1 Brown, Mount Poso, Kern Co.	22-27-27	1,351	fish. D.P.
Hobbee Oil, No. 2 Mount Poso, Kern Co.	14-27-27	1,195	sd. sh. drlg.
General Pet., No. 1 West Premier, Kern Co.	36-27-26	4,398	sd. sh. drlg.
Banducci, L. J., No. 2-T Fruitvale, Kern Co.	26-29-27	3,770	idle
Western Gulf Oil, No. 26 K.C.L., Fruitvale, Kern Co.	22-29-27	3,131	sd. sh. drlg.
Siemon Bros., No. 1 Kraebs, Fruitvale, Kern Co.	15-29-27	3,430	gr. sh. drlg.
Simmel, L. C., No. 1 Fruitvale, Kern Co.	23-29-27	3,340	sd. sh. drlg.
Gardner & Powell, No. 1 Fruitvale, Kern Co.	23-29-27	504	cmtd. 504
Mohawk Pet., No. 4-23 K.C.L., Fruitvale, Kern Co.	23-29-27	3,565	pump. 25 b.d.
B. & O. Oil, No. 1-T Fruitvale, Kern Co.	14-29-27	2,944	swabbing
Sandy Oil, No. 2 Fruitvale, Kern Co.	26-29-27	3,200	will deepen
American Expl., No. 1-G Mountain View, Kern Co.	18-30-29	4,792	P.B. 4,722
American Expl., No. 1-C Mountain View, Kern Co.	18-30-29	4,730	redrlg. 4,140
Mohawk Pet., No. 5 Earl Fruit, Mountain View, Kern	4-31-29	2,382	sd. sh. drlg.
Ohio Oil, No. 2-B Mountain View, Kern Co.	33-30-29	5,222	O.S. drlg.
North American Oil, No. 1-T Mountain View, Kern	9-31-29	2,650	sd. sh. drlg.
Petrol Prod., No. 1 Earl, Mountain View, Kern Co.	4-31-29	5,256	O.S. drlg.
Hogan Pet., No. 4 Symons, Mountain View, Kern Co.	5-31-29	6,188	cleaning out
Hogan Pet., No. 3 Peters, Mountain View, Kern Co.	5-31-29	3,160	sd. sh. drlg.
Hogan Pet., No. 10 Porter, Mountain View, Kern Co.	29-30-29	5,760	sd. sh. drlg.
Greer, P. H., No. 1 Perrel, Mountain View, Kern Co.	9-31-29	2,760	sd. sh. drlg.
Greer, P. H., No. 2 Perrel, Mountain View, Kern Co.	9-31-29	6,639	redrlg. 3,697
Monterey Expl., No. 7 Duff, Edison, Kern Co.	15-30-29	512	sd. sh. drlg.
Cajalco Pet., No. 1 Brown, Edison, Kern Co.	9-30-30	3,568	idle
East Edison Oil, No. 2 Edison, Kern Co.	23-30-30	1,950	dry; abd.
Arkelo Oil, No. 1 Lerdo, Kern Co.	23-28-26	10,050	fish. bit
Union Oil, No. 1-34 Rio Bravo, Kern Co.	34-28-25	10,310	O.S. drlg.
Continental Oil, No. 1 Rosedale, Kern Co.	12-29-26	10,210	br. sh. drlg.
Standard Oil, No. 11-4 KCL, Greeley, Kern Co.	20-29-26	7,804	flow. 1,675 b.d.
Standard Oil, No. 11-6, KCL, Greeley, Kern Co.	17-29-26	7,815	flow. 1,978 b.d.
Standard Oil, No. 11-7 KCL, Greeley, Kern Co.	20-29-26	1,420	sd. sh. drlg.
Union Oil, No. 4 San Emidio, Kern Co.	31-11-22	2,070	bailing
Shell Oil, No. 21-14 Old River, Kern Co.	14-30-25	8,613	bailing
Shell Oil, No. 4-30 Ten Section, Kern Co.	30-30-26	4,171	sd. sh. drlg.
Lilly Oil, No. 1 Midway-Sunset, Kern Co.	36-32-23	791	sd. sh. drlg.
C.C.M. Oil, No. 32-21 Midway-Sunset, Kern Co.	21-32-23	2,700	pump. 127 b.d.
Evans, H. B., No. 19 Midway-Sunset, Kern Co.	35-32-23	1,710	br. sh. drlg.
Monticello Oil, No. 4 Midway-Sunset, Kern Co.	27-31-22	882	cleaning out
Ethel D Oil, No. 43 Midway-Sunset, Kern Co.	36-12-24	1,430	pump. 38 b.d.
Quality Oil, No. 1-W.P., Midway-Sunset, Kern Co.	27-32-23	1,911	fishing
Texas Co., No. 23 Midway-Sunset, Kern Co.	32-32-24	3,005	sd. sh. drlg.
U. S. Pumping Equip., No. 5 Midway-Sunset, Kern Co.	12-11-24	1,660	P.B. 1,350
Richfield Oil, No. 13-D Crampton, Elk Hills, Kern Co.	1-31-24	3,334	pump. 215 b.d.
Richfield Oil, No. 1-H-A Crampton, Elk Hills, Kern Co.	1-31-24	1,573	sd. sh. drlg.
Reserve Oil & Gas, No. 33-4 Tejon, Kern Co.	33-11-19	5,443	P.B. 4,541
Wilshire Oil, No. 1 Tejon, Kern Co.	5-10-19	4,848	sd. sh. drlg.
Ohio Oil, No. 2 Tejon, Kern Co.	21-11-19	9,654	P.B. 6,662
Western Gulf Oil, No. 4 Cantua, Fresno Co.	32-16-15	5,895	sd. sh. drlg.
K. N. D. A., No. 4-18-J Kettleman North, Fresno Co.	18-21-17	10,753	flow. 1,210 b.d.
K. N. D. A., No. 47-28-J Kettleman North, Fresno Co.	28-21-17	6,663	br. sh. drlg.
K. N. D. A., No. 67-28-J Kettleman North, Fresno Co.	28-21-17	7,877	C.P. 7,582
K. N. D. A., No. 2-34-J Kettleman North, Fresno Co.	34-21-17	7,940	C.P. 7,750-90
K. N. D. A., No. 41-4-P Kettleman North, Fresno Co.	4-22-17	6,873	br. sh. drlg.
K. N. D. A., No. 83-4-P Kettleman North, Fresno Co.	4-22-17	5,672	sd. sh. drlg.
Standard Oil, No. 27-33-J Kettleman North, Fresno	33-21-17	4,797	sd. sh. drlg.
Standard Oil, No. 41-33-J Kettleman North, Fresno	33-21-17	7,798	sd. sh. drlg.
Standard Oil, No. 4-3-P Kettleman North, Kings Co.	3-22-17	7,473	sd. sh. drlg.
Standard Oil, No. 78-3-P Kettleman North, Kings Co.	3-22-17	8,005	cmtd. 7,942
Temblor Oil, No. 1-B Kettleman Middle, Kings Co.	25-23-18	7,262	br. sh. drlg.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Bldg., building.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
C.P., casing pressure.
Cd. or Crd., cored.
C.D., corrected depth.
Cg., coring.
C.L., center line.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging or plugged back.
P.B.P., plugging big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.R.T., rigging up rotary tools.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sdy. sh., sandy shale.
Sdtr., or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting on cement to set.
W.P., working pressure.
W.S.O., water shutoff.
W.S.S.O.K., water shutoff O.K.
W.S.O.N.G., water shut off no good.
W.S.R. or W.O.S.R., wait on standard rig.
Wtr., water.

Bisconer, R., No. 1 Cloud, Kings Co.	11-24-20	1,454	idle
Birch-Ranch Oil, No. 1 Orr, Kings Co.	5-23-17	3,114	dry; abd.
Dudley Ridge Dev., No. 1 Tulare Lake, Kings Co.	24-23-20	2,256	bl. sh. drlg.
Tri-Counties Oil, No. 1 Tulare Lake, Kings Co.	10-23-22	5,152	sd. sh. drlg.
Martin, J. D., No. 4-A Pismo, San Luis Obispo Co.	5-32-13	3,326	deepening
Tembior Oil, No. 1 Panorama, San Luis Obispo Co.	22-32-21	2,620	sd. sh. drlg.
Lewis, A. O., No. 1 Pecho, San Luis Obispo Co.	34-30-10	2,774	idle
Elba Oil, No. 1 Pajaro, Monterey Co.	6-13-2	2,060	gr. sd. drlg
Anderson, Amil, No. 1 Cholame, Monterey Co.	15-24-14	1,270	sd. sh. drlg.
California Oils, Inc., No. 1 Parkfield, Monterey Co.	33-23-15	3,500	will redrl.
Texas Co., No. 2 Eureka, Humboldt Co.	22- 3-1	7,708	P.B. 6,371
Amerada Pet., No. 1 Hamilton, Rio Vista, Solano Co.	24- 4-2	4,429	cmtd. 4,250
Buttes Oilfields, Ltd., No. 1 Kent, Sutter Co.	2-15-1	5,810	milling
Standard Oil, No. 1 Delano, Tulare Co.	36-24-23	3,962	sd. sh. drlg.
Turner, L. E., No. 1 Tipton, Tulare Co.	15-22-26	3,270	sd. sh. drlg.
Jennings, E. P., No. 1 Allensworth, Tulare Co.	4-24-23	2,709	cleaning out
Standard Oil, No. 1 Middle River, San Joaquin Co.	24- 1-5	6,865	gr. sd. drlg.
Texas Co., No. 1 Roberts Island, San Joaquin Co.	8- 1-6	5,251	sd. sh. drlg.
Coast Expl., Well No. 1, Stanislaus Co.	30- 4-9	6,311	dry; abd.
Stone & Youngberg, No. 1 Two Rock, Sonoma Co.	29- 5-8	271	sd. sh. drlg.
Standard Oil, No. 1 Woodland, Yolo Co.	32- 9-1	2,861	sd. sh. drlg.
Empire O. & G., No. 1 Woodland, Yolo Co.	8- 9-3	192	sd. sh. drlg.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Richfield Oil, No. 6 El Segundo, Los Angeles Co.	18- 3-14	7,538	cmtd. 7,462
Richfield Oil, No. 1-SF El Segundo, Los Angeles Co.	18- 3-14	7,690	P.B. 7,640
Richfield Oil, No. 1 Elsie, El Segundo, Los Angeles	12- 3-15	7,049	flow. 3,120 b.d.
Texas Co., No. 3 Security, El Segundo, Los Angeles	18- 3-14	5,596	sd. sh. drlg.
Republic Pet., No. 2 El Segundo, Los Angeles Co.	18- 3-14	7,477	will deepen
Lennox Pet., No. 1 Hawthorne, Los Angeles Co.	3- 3-14	5,710	sd. sh. drlg.
Douglas Oil, No. 9 Peck, Lawndale, Los Angeles Co.	20- 3-14	7,103	cmtd. 7,077
Young & Bryan, No. 1 Peck, Lawndale, Los Angeles	20- 3-14	6,700	deepening
Calizoo Oil, No. 1 S.L.A., Los Angeles Co.	16- 3-13	7,287	hd. sd. drlg.
L. V. Oil, No. 1 Torrance, Los Angeles Co.	16- 4-14	4,325	P.B. 4,265
B. C. L. Oil, No. 1 Torrance, Los Angeles Co.	5- 4-14	1,565	sd. sh. drlg.
C. C. M. Oil, No. 34-T Torrance, Los Angeles Co.	16- 4-14	4,282	P.B. 4,090
Bass & Goodknight, No. 8 Torrance, Los Angeles Co.	16- 4-14	3,914	sd. sh. drlg.
McLaren & Assoc., No. 1 Palos Verdes, Los Angeles	27- 4-14	3,992	P.B. 1,600
Standard Oil, No. 84 L.A.I., Inglewood, Los Angeles	8- 2-14	137	sd. sh. drlg.
Texas Co., No. 1 Moynier, Inglewood, Los Angeles Co.	8- 2-14	3,764	will P.B.
Country Club Oil, No. 1 Inglewood, Los Angeles Co.	19- 2-14	4,597	sd. sh. drlg.
Shell Oil, No. 90 Reyes, Dominguez, Los Angeles Co.	33- 3-13	7,580	recmtd. 7,535
Shell Oil, No. 91 Reyes, Dominguez, Los Angeles Co.	33- 3-13	6,498	sd. sh. drlg.
Union Oil, No. 54 Callender, Dominguez, Los Angeles	33- 3-13	5,630	sd. sh. drlg.
Union Oil, No. 47 Hellman, Dominguez, Los Angeles	33- 3-13	6,250	sd. sh. drlg.
Barnsdall Oil, No. 16 O'Dea, Rosecrans, Los Angeles	18- 3-13	6,990	sd. sh. drlg.
Barnsdall Oil, No. 17 O'Dea, Rosecrans, Los Angeles	18- 3-13	5,980	sd. sh. drlg.
Union Oil, No. 11 Rosecrans, Los Angeles Co.	18- 3-13	5,960	deepening
Macrate, A. N., No. 2 Rosecrans, Los Angeles Co.	17- 3-13	5,794	cmtd.
Universal Consd., No. 1-T Rosecrans, Los Angeles Co.	18- 3-13	7,588	flow. 400 b.d.
Boisa Chica Oil, No. 1 Rosecrans, Los Angeles Co.	20- 3-13	7,944	P.B. 7,528
Union Oil, No. 19 D.R., Playa Del Rey, Los Angeles	27- 2-15	984	sd. sh. drlg.
Burt, A. G., No. 1 Newhall, Los Angeles Co.	36- 4-17	1,985	cleaning out
Barnsdall Oil, No. 2-S.F., Newhall, Los Angeles Co.	26- 4-17	3,988	sd. sh. drlg.
Holbrook Pet., No. 1 Newhall, Los Angeles Co.	28- 4-16	5,824	recmtd. 5,733
General Pet., No. 15 Ford, Wilmington, Los Angeles	4- 5-13	2,282	sd. sh. drlg.
General Pet., No. 18 Ford, Wilmington, Los Angeles	4- 5-13	2,610	sd. sh. drlg.
General Pet., No. 19 Ford, Wilmington, Los Angeles	4- 5-13	2,362	sd. sh. drlg.
General Pet., No. 21 Ford, Wilmington, Los Angeles	4- 5-13	2,139	sd. sh. drlg.
General Pet., No. 2 Isco, Wilmington, Los Angeles	4- 5-13	3,650	rig. to pump
General Pet., No. 3 Isco, Wilmington, Los Angeles	4- 5-13	2,551	sd. sh. drlg.
General Pet., No. 6-T Wilmington, Los Angeles Co.	4- 5-13	2,693	sd. sh. drlg.
General Pet., No. 8-T Wilmington, Los Angeles Co.	4- 5-13	2,364	sd. sh. drlg.
Bankline Oil, No. 1-P.T., Wilmington, Los Angeles	33- 4-13	3,365	sd. sh. drlg.
Bankline Oil, No. 9-P.T., Wilmington, Los Angeles	33- 4-13	2,477	sd. sh. drlg.
Bankline Oil, No. 19-D.H., Wilmington, Los Angeles	34- 4-13	3,133	sd. sh. drlg.
Bankline Oil, No. 26-D.H., Wilmington, Los Angeles	34- 4-13	3,458	flow. 635 b.d.
Burnoel Oil, No. 586-A Wilmington, Los Angeles Co.	32- 4-13	2,354	sd. sh. drlg.
Carson Oil, No. 1 Wilmington, Los Angeles Co.	31- 4-13	3,450	sd. sh. drlg.
Caminol Co., No. 1 Wilmington, Los Angeles Co.	32- 4-13	1,953	sd. sh. drlg.
Crude Oil Drlg., No. 1-W Wilmington, Los Angeles	33- 4-13	3,361	O.S. drlg.
Crude Oil Drlg., No. 1-M Wilmington, Los Angeles	33- 4-13	3,406	sd. sh. drlg.
Dunlap, D. D., No. 10 Wilmington, Los Angeles Co.	33- 4-13	3,419	sd. sh drlg.
Eltra Oil, No. 10 Wilmington, Los Angeles Co.	33- 4-13	2,683	sd. sh. drlg.
Hall, Inc., No. 1-B Wilmington, Los Angeles Co.	33- 4-13	3,470	pump. 77 b.d.
Hall, Inc., No. 1-L Wilmington, Los Angeles Co.	32- 4-13	1,891	sd. sh. drlg.
Holly Dev., No. 2 Dominguez, Wilmington, L. Angeles	33- 4-13	3,135	sd. sh. drlg.
Hughes, W., No. 1 Wilmington, Los Angeles Co.	33- 4-13	3,562	sd. sh. drlg.
Jergins Trust, No. 3 Wilmington, Los Angeles Co.	34- 4-13	3,025	sd. sh. drlg.
Jergins Trust, No. 6 Wilmington, Los Angeles Co.	34- 4-13	3,502	pump. 149 b.d.
Macmillan Pet., No. 5-H Wilmington, Los Angeles Co.	32- 4-13	3,615	sd. sh. drlg.
Oceanic Oil, No. 1 Wilmington, Los Angeles Co.	33- 4-13	2,184	sd. sh. drlg.
Pac. Western, No. 3 Patten, Wilmington, Los Angeles	32- 4-13	2,930	flow. 152 b.d.
Pac. Western, No. 1 Ronan, Wilmington, Los Angeles	33- 4-13	2,955	sd. sh. drlg.
Pac. Western, No. 2 Murphy, Wilmington, L. Angeles	33- 4-13	2,880	sd. sh. drlg.
Packard Pet., No. 20-8-2 Wilmington, Los Angeles Co.	33- 4-13	3,000	flow. 215 b.d.
Royalty Service, No. 3-A-1 Wilmington, Los Angeles	33- 4-13	173	sd. sh. drlg.
Royalty Service, No. 1-B-2 Wilmington, Los Angeles	33- 4-13	3,536	O.S. drlg.
Royalty Service, No. 1-P Wilmington, Los Angeles	32- 4-13	2,640	sd. sh. drlg.
Royalty Service, No. 842-2 Wilmington, Los Angeles	33- 4-13	3,759	sd. sh. drlg.
Royalty Service, No. 1-C Wilmington, Los Angeles	33- 4-13	2,674	sd. sh. drlg.
Royalty Service, No. 5-A Wilmington, Los Angeles	33- 4-13	1,952	sd. sh. drlg.
Royalty Service, No. 3-B Wilmington, Los Angeles	33- 4-13	2,373	sd. sh. drlg.
Selegna Drlg., No. 7 Wilmington, Los Angeles Co.	33- 4-13	2,551	sd. sh. drlg.
Sonwell Oil, No. 2 Wilmington, Los Angeles Co.	33- 4-13	1,961	sd. sh. drlg.
Sovereign Oil, No. 1-M Wilmington, Los Angeles Co.	33- 4-13	3,320	sd. sh. drlg.
Texas Co., No. 1 Refinery, Wilmington, Los Angeles	34- 4-13	2,121	sd. sh. drlg.
Union Pacific, No. 9 Wilmington, Los Angeles Co.	33- 4-13	2,591	sd. sh. drlg.
Union Pacific, No. 19 Wilmington, Los Angeles Co.	3- 5-13	3,575	sd. sh. drlg.
Union Pacific, No. 27 Wilmington, Los Angeles Co.	4- 5-13	3,504	sd. sh. drlg.
Union Pacific, No. 28 Wilmington, Los Angeles Co.	4- 5-13	3,577	flow. 1,030 b.d.
Union Pacific, No. 31 Wilmington, Los Angeles Co.	34- 4-13	3,112	sd. sh. drlg.
Union Pacific, No. 32 Wilmington, Los Angeles Co.	33- 4-13	2,797	sd. sh. drlg.
Union Pacific, No. 35 Wilmington, Los Angeles Co.	33- 4-13	3,022	sd. sh. drlg.
Union Pacific, No. 36 Wilmington, Los Angeles Co.	33- 4-13	2,970	sd. sh. drlg.
Union Pacific, No. 43 Wilmington, Los Angeles Co.	4- 5-13	2,584	sd. sh. drlg.
Union Pacific, No. 2-C Wilmington, Los Angeles Co.	33- 4-13	3,020	sd. sh. drlg.
Wilbur, V. R. G., No. 3-M Wilmington, Los Angeles	33- 4-13	3,580	pump. 80 b.d.
Sunset Oil, No. 1 Manhattan, Los Angeles Co.	19- 3-14	6,384	sd. sh. drlg.
Julian, C. A., No. 1 Koch, Walnut, Los Angeles Co.	5- 2-9	2,160	idle
Richfield Oil, No. 2 Ciocca, Montebello, Los Angeles	5- 2-11	5,966	sd. sh. drlg.
Richfield Oil, No. 1 Estrada, Montebello, Los Angeles	5- 2-11	5,540	cleaning out
Texas Co., No. 17 Baldwin, Montebello, Los Angeles	6- 2-11	7,152	sd. sh. drlg.
Standard Oil, No. 2 Temple, Montebello, Los Angeles	10- 2-11	2,700	sd. sh. drlg.
Hildon Oil, No. 2 Flood Control, Los Angeles Co.	13- 4-13	4,038	sd. sh. drlg.
Texas Co., No. 3 Flower, Long Beach, Los Angeles	19- 4-12	4,604	O.S. drlg.
Mitchell, A. D., No. 3 Plymouth, L. Beach, L. Angeles	19- 4-12	3,743	sd. sh. drlg.
Shell Oil, No. 14 Cresson, Long Beach, Los Angeles	19- 4-12	3,380	pump. 104 b.d.
Richfield Oil, No. 10 Denni, Long Beach, Los Angeles	19- 4-12	2,844	sd. sh. drlg.
Richfield Oil, No. 5 Frye, Long Beach, Los Angeles	19- 4-12	4,210	sd. sh. drlg.
Coastal Oil & Gas, No. 1 Signal, L. Beach, L. Angeles	19- 4-12	4,500	swabbing
Clayton, G. L., No. 1 North Long Beach, Los Angeles	32- 3-12	5,005	cleaning out
Union Oil, No. 100 Santa Fe Springs, Los Angeles Co.	6- 3-11	10,789	milling
Texas Co., No. 7-W Santa Fe Springs, Los Angeles Co.	6- 3-11	4,191	reaming
Wales Pet., No. 1-H Monterey Park, Los Angeles Co.	26- 1-12	3,265	sd. sh. drlg.
Tide Water A. O., No. 16-B Seal Beach, Orange Co.	11- 5-12	6,510	flow. 140 b.d.
Wilshire Oil, No. 1-A Huntington, Orange Co.	2- 6-11	2,147	sd. sh. drlg.
Wilshire Oil, No. 6-B Huntington, Orange Co.	2- 6-11	2,785	sd. sh. drlg.
Tide Water A. O., No. 41 M.K., Huntington, Orange	2- 6-11	4,135	sd. sh. drlg.
Union Oil, No. 10 Brooks, Huntington, Orange Co.	34- 5-11	4,079	sd. sh. drlg.
W. P. R. Oil, No. 3 Huntington, Orange Co.	35- 5-11	4,900	P.B. 4,785
Commander Oil, No. 1 Newport, Orange Co.	29- 6-10	7,905	dry; abd.
Shell Oil, No. 4-1 Columbia, Olinda, Orange Co.	9- 3-9	4,900	sd. sh. drlg.
Cox, M. A., No. 1 East Coyote, Orange Co.	15- 3-10	5,450	P.B. 4,950
Dolicia Oil, No. 3 A.U.W., East Coyote, Orange Co.	24- 3-10	4,089	P.B. 3,960
Kelly, Thomas, No. 11 East Coyote, Orange Co.	24- 3-10	3,725	pump. water
Tide Water A. O., No. 42 East Coyote, Orange Co.	22- 3-10	3,595	rigging up
Standard Oil, No. 2-25 Kraemer, Richfield, Orange	29- 3-9	4,500	run. tubing
Union Oil, No. 14 Stern, Richfield, Orange Co.	33- 3-9	3,258	recmtd. 3,212
Bachman Pet., No. 1 Yorba, Orange Co.	21- 3-9	605	sd. sh. drlg.
Signet Oil, No. 1 Yorba, Orange Co.	21- 3-9	1,947	br. sh. drlg.
West American Oil, No. 1 Tustin, Orange Co.	14- 5-9	6,014	sd. sh. drlg.

KANSAS

Week Ending July 31 (Descriptions are East unless marked otherwise)

Barber County

Barbara Oil Co. No. 1-27 Holmes, C NW W. I. Southern, Inc., No. 1 Davis, SE SE NE sec. 24-34-15w. K.C. 4,215 ft.; set 8-in. 4,572 ft.; R.U.S.T.

Barton County

J. B. Hanna No. 1 Luce, SW cor. sec. 21-20-13w. S.S.O. 3,250-55 ft.; H.F.W. 3,-377 ft.

Helmerich & Payne et al No. 1 Sessler, SW SW SE sec. 29-20-1w. T.D. 3,420 ft.; S.O. 3,417-20 ft.

Sam Murphy No. 1 Beck, NE cor. sec. 17-17-12w. Anhy. 760 ft.; drlg. 2,890 ft.

Phillips Pet. Co. No. 1 McClanahan, NE NE SE sec. 7-16-13w. Anhy. 875 ft.; drlg. 2,005 ft.

C. L. Price No. 1 Hammeke, NE NE SW sec. 12-18-12w. Sil. 3,415-27 ft.; 2,100 ft. O.I.H.; set 5-in. 3,402 ft.

Stanolind O. & G. Co. No. 1 Natl. Bank, SE SE SW sec. 36-16-13w. Set 10-in. 328 ft.

Stanolind No. 1 Schartz, NW cor. sec. 33-19-11w. Sil. 3,328 ft.; acd.; P. 541 B.O and 236 B.W. in 24 hrs.; comp.

Vickers Pet. Co. No. 1 Lucas, NW NW NE sec. 16-17-14w. Anhy. 898 ft.; drlg. 1,055 ft.

Chase County

California-Illinois-Kansas Oil Co. No. 1 Hughes, SW NW SE sec. 13-22-9e. Drlg. 1,700 ft.

Chautauqua County

C. L. Brosius et al No. 1 Garrett, NW SW NW sec. 26-32-11. Drlg. 1,370 ft.

Robinson et al, No. 1 Foster, SW cor. sec. 6-33-12. Sil. 1,994 ft.; H.F.O.

C. R. Ross et al No. 1 Walker, NW NW SE sec. 5-33-11. Drlg. 600 ft.

S. H. Vineard No. 1 Hughes, NE NE SE sec. 13-32-12. S.D. 300 ft.

Cowley County

Lewis Prod. Co. No. 1 Feaster, SE NE SW sec. 36-32-5. Drlg. 1,930 ft.

National Ref. Co. No. 1 Schwantes, NW SW NE sec. 16-32-3e. Drlg. 1,120 ft.

Rex & Morris et al No. 1 Lanier, NE NE NW sec. 10-30-5e. Run 8-in. to 1,938 ft.

E. B. Shawver No. 1 fee, NW NE SE sec. 3-30-4e. Drlg. 1,340 ft.

Trees Oil Co. No. 1 Hornbeck, NW cor. sec. 5-33-4. Miss. 3,228 ft.; T.D. 3,229 ft.

E. Wakefield No. 1 Powers, NW SW NW sec. 8-32-6. Miss. 3,157-60 ft., T.D.; D. &A.

Elk County

Morgan et al No. 1 Cook, NW cor. sec. 29-30-12. Sil. 1,947 ft.; T.D. 2,001 ft.; D.&A.

Ellis County

Billings No. 1 Smith, SE SE NW sec. 14-12-16w. Sil. 3,356 ft.; first oil 3,360-64 ft.; T.D. 3,370 ft.; fsg.

Brunson Drlg. Co. et al No. 1 Weisner, SE SW SE sec. 31-13-17w. Drlg. 690 ft.

Empire O. & R. Co. No. 1 Hall, NE cor. sec. 14-11-17w. Cong. 3,310 ft.; Simp. 3,385 ft.; Sil. 3,406 ft.; cg.

Lario O. & R. Co. No. 1 Bell, NW NW NE sec. 8-12-18w. Drlg. 685 ft.

C. E. W. Skiles et al No. 1 Jensen, SW SE NE sec. 26-12-18w. Drlg. 787 ft.

Vickers Pet. Co. et al No. 1 Parker, C N½ NE NW sec. 35-11-16w. K.C. 2,965 ft.; drlg. 3,180 ft.

Earl Wakefield et al No. 1 Burnett, NW NW NE sec. 1-11-18w. Anhy. 1,310 ft.; S.D. 2,690 ft.

Western Kansas O. & R. Co. and Aylward Prod. Co. No. 1 Schmeidler, NW cor. sec. 22-12-17w. Drlg. 2,285 ft.

Winkler & Koch No. 1 Karlin, NW cor. sec. 13-12-18w. S.D. 576 ft.

Ellsworth County

Equity Gas Co. No. 1 Razoe, NE NE SE sec. 31-15-10w. Drlg. 1,801 ft.

C. E. W. Skiles et al No. 1-A Sturn, SE SE SW sec. 31-17-9w. S.D. 1,990 ft.

Grant County

Columbian Fuel No. 1 Alderman, C SW sec. 18-29-35w. Set 8-in. 2,476 ft.; R.U. S.T.

Panhandle Eastern Pipe Line Co. No. 1 Taggert, C sec. 11-30-37w. Set 10-in. 561 ft.; W.O.C.

Greenwood County

Ward McGinnis et al No. 1 Henly Estate SW cor. sec. 25-25-9. T.D. 2,234 ft.; H. F.W.; P.B.

Western Kansas O. & R. Co. No. 1 Taylor SE SE SW sec. 6-27-12. Cmt. 8-in. 1,854 ft.; H.F.O.

Hamilton County

Denver Prod. & Ref. Co. No. 1 Porter. SW SW NE sec. 30-25-41w. Miss. 5,454 ft.; drlg. 5,554 ft.

Harper County

Magnolia Pet. Co. No. 1 Freeman, SE NW SW sec. 3-31-6w. Simp. dol. 4,690-95 ft.; fsg.

Harvey County

Bell O. & G. Co. et al No. 1 Austin, SE NE NE sec. 28-23-1e. Sil. 3,603-45 ft.; T.D.; D.&A.

E. I. Shaffer et al No. 1 Epp, SE cor. sec 15-23-3w. Hunton 3,660 ft.; Simp. 3,811 ft.; drlg. 3,915 ft.

Simpson & Noble et al No. 1 Pierce, SW SE NE sec. 25-22-2w. Hunton 3,364 ft.; H.F.W. 3,389 ft.; Viola 3,440 ft.; drlg. 3,452 ft.

Kearny County

J. L. Murphy No. 1 Masonic Home, C NW sec. 1-26-36w. T.D. 519 ft.; fsg.

Kiowa County

Stanolind Oil & Gas Co. and Amerada Pet. Corp. No. 1 Pyle, Jr., C NW NE sec. 8-29-16w. Sil. 5,050-75 ft., T.D.; D. &A.

Lyon County

Arthur Sory No. 1 Byrd, SW SW SE sec. 32-21-11. Set 8-in. 1,717 ft.; drlg. 1,807 ft.

Marion County

Hutchinson O. & G. Co. et al No. 1 Ehrmann, SE SE SW sec. 15-18-1e. Drlg. 595 ft.

Western Kansas O. & R. Co. et al No. 1 Suderman, SE SW NW sec. 22-20-2e. Set 10-in. 1,871 ft.; drlg. 1,943 ft.

McPherson County

Bradley Bros. No. 1 Barnholt, SW SW SE sec. 30-30-5w. Chat 3,292 ft.; T.D. 3,334 ft.; acidized.

Fred C. Frank et al No. 1 Doles, SE NW NE sec. 12-19-1w. Set 10-in. 1,885 ft.; drlg. 2,040 ft.

Wamnoff et al No. 1 Nuse, SE NE SW sec. 18-18-4w. S.D. 1,320 ft.

Mitchell County

Geo. Siedhoff et al No. 1 Greiss, SW SW SE sec. 16-8-10w. Drlg. 3,616 ft.

Ness County

...es & Lane No. 1 Page Milling Co., SE SE NW sec. 36-18-26w. Fsg. 1,028 ft.

Newton Dev. Co. No. 1 Tenny, NW NW SE sec. 19-18-25w. Inc. oil 4,400-02 ft.; 3,500 ft. O.I.H. at 4,406 ft.; S.D.

Osborne County

Fred C. Chaddox and Atlantic Ref. Co. No. 1 Slater, NE SW NE sec. 33-10-15w. Drlg. 800 ft.

Pratt County

Atlantic Ref. Co. et al No. 1 Runyon, SW NW NE sec. 11-27-13w. Drlg. 4,238 ft.

Skelly Oil Co. et al No. 1 Adams, SE NW NE sec. 2-28-11w. Drlg. 409 ft.

Reno County

Carter Oil Co. et al No. 1 Bontrager, C E½ NE NE sec. 26-24-5w. Sil. 3,894 ft. T.D. 3,925 ft.; P.B. 3,735 ft.; set 4-in. 3,703 ft.

Helmerich & Payne No. 1 Haines, SW cor. sec. 9-25-5w. Drlg. 1,864 ft.

Imo O. & G. Co. et al No. 1 Watkins, SE cor. sec. 14-22-7w. Chat 3,548 ft.; 100 ft. W.I.H.; S.D.

Rice County

Bell O. & G. Co. et al No. 1 Wilkins, NW NW NE sec. 23-21-9w. Simp. 3,591 ft.; Sil. 3,643 ft.; T.D. 3,662 ft.

Gillispie et al No. 1 Strong, NE NE NW sec. 9-18s-8w. R.U.
John Hanna et al No. 1 Marshall, NE NW NW sec. 30-18s-8w. C.O. 1,440 ft.
H. V. Holland et al No. 1 Brothers, S cor. sec. 12-21-7w. U.R. 8-in. at 2,875 ft.
Fred Phillips et al No. 1 Hubenett, S NW SW sec. 23-20-6w. T.D. 3,366 ft.; acd.; p. 252 B.O. and 150 B.W.; comp.
A. E. Witt et al No. 1 Fair, NW SE SE sec. 4-22-8w. Set 10-in. 2,207 ft.; fsg.

Rooks County

Brunson Drlg. Co. et al No. 1 Casey, SE SE NE sec. 22-9s-16w. Set 5-in. 3,555 ft.; Cong. 3,570 ft.; drlg. 3,647 ft.
Graham et al No. 1 Fike, NW cor sec 9-9-17w. T.D. 3,326 ft.; p. 230 B.O. in 72 hrs.
H. Lester No. 1 Methene, SE SE NE sec. 29-10-20w. Drlg. by at 3,818 ft.

Rush County

Kansas P. L. Co. et al No. 1 Jones, NW cor. sec. 35-17-16w. K.C. 3,337 ft.; La-Motte 3,569 ft.; cd. 3,570-80 ft.; S.S.O.; set 7-in.
Howe & Brouk No. 1 Lebsack, SE SE NE sec. 13-16-16w. Sil. 3,492-95 ft.; 1,500 ft. sulfur water in hole in 2½ hrs.: T.D. 3,512 ft.; S.D.O.
A. Murphy et al No. 1 Roth, NW NW SW sec. 21-16-18w. Reagan 3,580 ft.; loaded hole; T.D. 3,608 ft.; D.&A.

Russell County

Boyle & Grossman No. 1 Deines, SE SE SW sec. 36-15-15w. Sil. 3,451 ft.; H.F.W. 3,471-76 ft.; T.D. 3,179 ft.
Boyle & Grossman No. 1 Steinert Est NE SE NW sec. 34-15-15w. K.C. 3,178 ft.; H.F.W. 3,257-62 ft.; set 6-in. 3,262 ft.; drlg. 3,272 ft.
Shell Pet. Corp. No. 1 Batt, SE cor. sec. 35-15-14w. Anhy. 857 ft.; drlg. 1,458 ft.
Winkler & Koch No. 1 Jones, SE SE NW sec. 22-14-13w. Sil. 3,180 ft.; S.D.O.

Sedgwick County

Home Stake Royalty Co. No. 1 McCormick, SW SW NW sec. 23-25-3w. T.D. 425 ft.; skid rig 50 ft. north.
E. H. Moore, Inc., et al No. 1 Naughter, SW SW NW sec. 29-29-1e. Sil. 3,828-44 ft., T.D.; D.&A.
Roxana Drlg. Co. et al No. 1 Woodman, SW NW SW sec. 26-26-1w. S.D. 2,469 ft.
E. B. Shawver No. 1 Furman, SW NE SE sec. 24-29-3w. Miss. 3,645-78 ft.; C.O.
W. G. Talbott et al No. 1 Downs Est., SE SE NW sec. 32-28-2e. Drlg. 480 ft.
Union O. & R. Co. et al No. 1 Howell, SW cor. sec. 6-29-1e. Drlg. 235 ft.

Stafford County

Newman & Winemiller No. 1 Sittner, NE cor. sec. 33-21-12w. Drlg. 2,240 ft.
Stanolind O. & G. Co. No. 1 Francis, NE NE NW sec. 26-22-13w. K.C. 3,410 ft.; drlg. 3,441 ft.

Sumner County

Douglass & Gear No. 1 Strickler, SW NW NE sec. 30-32-1w. Drlg. 3,015 ft.
W. M. McKnab No. 1 Blair, SW cor. sec. 7-30-1e. Set 12-in. 1,110 ft.; C.O.

Trego County

W. I. Southern, Inc., No. 1 Latimer, NW NW SE sec. 19-15-22w. U.R. 5-in. at 4,580 ft.
F. L. Thorn et al No. 1 Koeppen, SE SE SW sec. 31-14-24w. H.F.W. 3,664-78 ft.; drlg. 3,689 ft.
Turner et al No. 1 Rogers, C SW sec. 3-15-23w. Sil. 4,550 ft.; T.D. 4,638 ft.; D.&A.

Woodson County

M. B. Allen No. 1 Flack, NE NE NW sec. 1-26-14. Sd. 1,313-42 ft.; T.D. 2,300,000 ft. gas.
Lilly et al No. 1 Wall, SW SE SE sec. 25-25-13. Drlg. 1,458 ft.
Morris et al No. 1 Koening, SE SE NW sec. 35-24-15. H.F.W. 1,458 ft.; S.D.O.
Fred Rapp No. 1 Houghland, NW NW SE sec. 2-25-15. Drlg. 1,400 ft.

OKLAHOMA

Week Ending July 31

NORTHERN OKLAHOMA

Beckham County

Bud Lewis No. 1-A Douglas C SE NE sec. 21-8n-26w. Drlg. 1,105 ft.
Mid-American Oil Co. No. 1-A Biscoe, SW cor. sec. 28-8-22w. T.D. 2,200 ft.; S.D. for wtr.

Caddo County

Clyde Becker et al No. 1 Pharris, SE SE NW sec. 24-6-12w. Drlg. 5,960 ft.

Cleveland County

W. R. Hollenbeck No. 1 Norman, NW NW NE sec. 17-9-2w. T.D. 7,178 ft.; fshg.
Hollenbeck et al No. 1 Ward, SW SE NE sec. 30-7-1e. T.D. 628 ft.; W.O.C.

Creek County

L. B. Jackson No. 1 Alberty, NE NE NW sec. 25-18-9. T.D. 1,350 ft.; U.R.
M. W. Mosier et al No. 1 Holcomb, SE SW NW sec. 19-18-8. Burgess 3,005 ft.; T.D. 3,007 ft.; rep. boiler.

Garvin County

Nels Burton et al No. 1 Burch, SE SE SW sec. 3-3n-1w. T.D. 4,605 ft.; D.&A.
Carter Oil Co. No. 1 Potts, C E½ SE NW sec. 36-1n-3w. T.D. 1,415 ft.; drlg. out cmt. at 1,278 ft.
B. C. D. Edwards No. 1 Clark, NE cor. sec. 16-3n-3e. Spd.

Grady County

Gulf Oil Corp. No. 1 Thomas, SW NW NW sec. 14-4-5w. Drlg. 5,550 ft.

Grant County

Carter Oil Co. et al No. 1 Crisman, C W½ SW NW sec. 16-25-3w. T.D. 5,233 ft.; rep. rig.
Carter Oil Co. et al No. 1 Kolarik, NW SW sec. 4-26-5w. Chatla 5,545 ft.; Dol. 5,637 ft.; Wilcox 5,667 ft.; cg.

Haskell County

Continental Oil Co. No. 1 Ferguson, SW SE NE sec. 33-8-20. Est. 2,300,000 ft. gas; drlg. 5,790 ft.

Hughes County

W. O. Allen No. 1 Barnard, SW cor. sec. 24-8-8. Hunton 3,972 ft.; S.O. in base; Syl. 4,122 ft.; Viola 4,185 ft.; T.D. 4,255 ft.; circ.
Burke-Greis Oil Co. No. 1 Rhea, SW SW SE sec. 14-10-9. Drlg. 1,145 ft.
Carter Oil Co. No. 1 Hamilton, C W½ NE SW sec. 33-4-9. Sylvan 5,474 ft.; drlg. 5,885 ft.
E. H. Moore, Inc., No. 1 Buck, NW SW SW sec. 21-8-10. Crom. 3,284 ft.; T.D. 3,301 ft.; U.R. 8-in.
Moroney & Healey No. 1 Field, C NW SW sec. 11-9-11. T.D. 2,798 ft.; est. 2,000,000 ft. gas; S.D. for water.
Texas Co. No. 1 Cox, NE NW NW sec. 23-9-8. Miss. Caney 3,750 ft.; drlg. 3,949 ft.

Kay County

Black Gold Oil Co. No. 2 Cooley, SW cor. sec. 25-28-4e. T.D. 1,920 ft.; U.R. 6-in. at 1,720 ft.

Kiowa County

Hughes & Reese No. 1 Fultz, SE cor. sec. 10-6-18w. Drlg. 200 ft.
Kiowa Oil Corp. No. 1 Finder, C SW NE sec. 4-6-20w. T.D. 1,000 ft.; S.D.

Latimer County

Clark Drlg. Co. et al No. 1 Wilson, C SE SE sec. 15-5-18. T.D. 6,515 ft. in Atoka; may run 7-in. csg.

Lincoln County

Cimarron Oil Corp. No. 1 Ornor, C SW SE sec. 31-17-2e. Cleve. 3,802 ft.; Big L. 4,188 ft.; Oswald 4,240 ft.; T.D. 4,324 ft.; S.D. for wtr.

Logan County

Shell Pet. Corp. et al No. 1 Waddle, SW SE NW sec. 36-15-4w. Tonkawa L. 4,280 ft.; Avant 4,670 ft.; drlg. 5,228 ft.

Noble County

Herndon Drlg. Co. No. 1 Baggett, SE cor. sec. 13-21-3e. Miss. 3,920 ft.; drlg. 4,044 ft.
Phillips Pet. Co. No. 1-A Neil, NE cor. sec. 15-23-2w. Arbuckle 5,025 ft.; set 5⅞-in. 5,034 ft.; T.D. 5,200 ft.; C.O.

Okfuskee County

F. W. Merrick No. 1 Mackey, NE NE SW sec. 29-11-10. Drlg. 875 ft.
Palmer Oil Corp. No. 1 Welty, SE cor. sec. 2-12-17. Cg. 2,846 ft.
Riverland Oil Co. No. 1 Board, NE NW SE sec. 10-13-10. Set 6-in. 2,788 ft.; T.D. 2,840 ft.

Oklahoma County

Frank Buttram et al No. 1 Cole, NW cor. sec. 16-14-1e. T.D. 150 ft.; S.D.

Osage County

Norbla Oil Co. No. 1 Osage, SE cor. sec. 35-23-6. T.D. 2,876 ft.; D.&A.

Pawnee County

Carter Oil Co. No. 1 Wells, C E½ SE NW sec. 30-23-5. Bv. 3,215-45 ft., T.D.; D.&A.

Pontotoc County

Boettcher O. & G. Co. No. 1 Cann, SE NW NE sec. 25-4n-7e. Sylvan 4,100 ft.; Viola 4,213 ft.; drlg. 4,329 ft.
Clark Drlg. Co. et al No. 1 Richardson, SE SE NW sec. 30-4-8. Dense 4,420 ft.; T.D. 4,760 ft.; D.&A.
W. A. Delaney et al No. 1 Payton, NE NE SE sec. 1-4-7. O.W.D.D.; second Wilcox 4,227 ft., T.D.; D.&A.
Norbla Oil Co. No. 1 Kennedy, SE SE NE sec. 13-2-5. T.D. 1,601 ft.; S.D.
Papoose Oil Co. et al No. 1 Jones, NW SE NW sec. 2-4-5. Viola 2,595 ft.; T.D. 2,840 ft.; run Schlumberger; S.D.O.
Roodhouse et al No. 1 Booth, SE NW SE sec. 20-2-6. T.D. 4,966 ft.; P.B. 4,397 ft.; shot 3,094-3,110 ft.; swbd. 68 B.O. in 8 hrs.
Southern Oil Co. No. 1 Young, NE NE SE sec. 17-3-7. Drlg. 1,870 ft.
Union Dev. Co. No. 1 Abbott, SW NW NE sec. 34-3-6. Drlg. 2,475 ft.

Pottawatomie County

Atlantic Ref. Co. No. 1 Dooley, SE SE SW sec. 9-11-5. Set 7-in. 4,917 ft.; T.D. 4,919 ft.; P.B. 4,770 ft.; W.O.C.
Mid-Continent Pet. Corp. No. 1 Ne-Thah-Pea-Se, SE SE NE sec. 24-11-4. Dense 4,845 ft.; Dol. 4,853 ft.; T.D. 4,886 ft.; to run csg.
Roy S. Nash et al No. 1 Miller, C N½ NE SE sec. 29-6-3e. Drlg. 1,860 ft.
Stanolind O. & G. Co. and Amerada Pet. Corp. No. 1 Billington-B, SW SE SW sec. 32-9-3e. 2nd Wilcox 5,316 ft.; T.D. 5,321 ft.; P.B. 5,238 ft.; acd.; flwd. 349 B.O. in 6 hrs.; comp.
British-American Oil Co. No. 1 Ramsey, SE SE NE sec. 27-6-4. T.D. 3,606 ft.; rng. Halliburton tester.

Seminole County

E. W. Jones et al No. 1 Belford, NE SE NE sec. 9-9-8. Drlg. 150 ft.
Stanolind O. & G. Co. and Amerada Pet. Corp. No. 1 Salina, SE NE NW sec. 4-5-6. Drlg. 2,246 ft.

Washita County

John Koberg No. 1 Harms, NW NW NE sec. 6-10-16w. T.D. 3,670 ft.; rep. pmps.

SOUTHERN OKLAHOMA

Carter County

C. F. Dillingham No. 1 Evans, NW NW SW sec. 12-1s-3w. Drlg. 100 ft.

Coal County

Carter Oil Co. No. 1 Clayton, C W½ NE SW sec. 27-2n-9e. Bldg. rig.

Comanche County

Frank Scott No. 1-A Kuntz, SE NE SE sec. 21-4n-11w. T.D. 2,793 ft.; fsg.

Cotton County

Indian Territory Illuminating Oil Co. No. 1 Collins, NE cor. sec. 18-4s-10w. Cisco 1,400 ft.; Canyon 2,431-2,540 ft.; drlg. sh. 2,570 ft.

Jackson County

Ace Gutowsky No. 1 Booker, NW cor. sec. 33-2n-18w. T.D. 580 ft.; S.D.
Ace Gutowsky No. 1 Howard, NE SW NW sec. 10-3n-19w. Drlg. 927 ft.
E. L. Lippert et al No. 1 Miller, NW cor. sec. 4-2n-18w. T.D. 285 ft.; S.D.

Johnston County

Patton et al No. 1 McCrummins, C SW SW NE sec. 16-1s-6e. S.D. 1,165 ft.

Love County

Sinclair Prairie Oil Co. No. 1 Stockton, SE SE SW sec. 26-6s-2w. T.D. 8,583 ft. P.B. 6,927 ft.; run 6,125 ft. of tbg.; flwd. 50 to 57 B.O. every 4th or 5th day.

McCurtain County

Wilcox O. & G. Co. No. 1 Newman, SW SW SE sec. 30-7s-23e. Set 11-in. csg. 1,130 ft.; drlg. 1,220 ft.

Marshall County

Neff-Godfrey No. 1 Chapman, SW SE SW sec. 36-4s-4e. Drlg. 1,916 ft.

Murray County

O. O. Owens No. 1 Fryer, NE SE NE sec. 34-1s-3e. Bromide sd. 2,570-74 ft. T.D., S.D.
Power Oil Co. No. 1 Lancaster Trust, C SW NE sec. 10-1-2e. T.D. 3,438 ft.; drlg. out cmt. from 3,178-3,245 ft.

Pushmataha County

Erle Halliburton et al No. 1 Bagwell, SW NE NE sec. 30-3s-15e. T.D. 3,650 ft.; crooked hole; P.B. and W.O.C.

Stephens County

Carter Oil Co. No. 1 Harlev, C NE NE sec. 24-2s-4w. Bird Eye 7,480 ft.; Oolitic 7,554 ft.; S.O. from 7,554-7,603 ft.; cg. ahead.
Jack Cohen No. 1 Pierce, NE NE NW sec. 24-2s-6w. Drlg. 672 ft.
Coline Oil Co. No. 1 Johnson, C SW SE SE NE sec. 1-2n-8w. Drlg. 8,220 ft.
Ed Parsons No. 1 Blake, C SW NW sec. 22-2n-8w. T.D. 4,966 ft.; fsg.

Tillman County

Cavens et al No. 1 Southerland, SW SW NW sec. 35-4s-16w. T.D. 44 ft.; S.D.
Magnolia Pet. Co. No. 1 Brown, SW SE NE sec. 21-3s-18w. Canyon 3,480 ft., Strawn 4,335 ft.; drlg. 6,145 ft.
Tom Walker No. 1 Bowman, SW SW NW sec. 10-4s-17w. T.D. 20 ft.; S.D.

ARKANSAS

Ashley County

Phillips Pet. Co. No. 1 Godfrey, C S½ SW NW sec. 18-17-9. Drlg. 3,680 ft.

Columbia County

Robt. Keene et al No. 1 Runyon, NW SE NE sec. 1-16s-21w. S.D. 700 ft.
Standard of La. No. 1 J. P. McKean, SW sec. 8-16s-22w. Drlg. 500 ft.

Crittendon County

Stanley Oil Corp. No. 1 Danner, C sec. 18-8n-9e. S.D. 1,100 ft.; D.S. stuck.

Howard County

Beetcher O. & G. No. 1 Ark. Portland Cmt. Co., sec. 28-11-27. T.D. 2,936 ft.; D.&A.

Lonoke County

Frank F. Silver No. 2 Chambers, sec. 17-2n-7w. T.D. 1,500 ft.; S.D.; W.O.

Miller County—Rodessa

Anding & Bird No. 1 B. A. Skipper, SW NW SW sec. 11-20-28. Drlg. 2,400 ft.
F. W. Burford No. 1 A. A. Capps, W½ sec. 14-20-28. Drlg. 5,360 ft.
F. W. Burford No. 1 Easton, E½ SW SE sec. 11-20-28. Drlg. 5,081 ft.
F. W. Burford No. 1-B Gerald, NE cor. sec. 15-20-28. Drlg. 5,566 ft.
F. W. Burford No. 1 Perdue, SE NE SE sec. 11-20-28. Drlg. 5,625 ft.
H. C. Cummings No. 1 E. B. Mitchell, NW NE NE sec. 10-20-28. M.I.M.
W. M. Layton No. 1 Terry, NW cor. sec. 14-20-28. Coring 5,472 ft.
McClanahan et al No. 2 A. A. Capps, SW sec. 11-20-28. Drlg. 3,440 ft.
McClanahan et al No. 3 Capps, sec. 11-20-28. Drlg. 2,180 ft.
McClanahan No. 1 Larey, sec. 11-20-28. R.U.
Roberts Drlg. Co. No. 1 W. W. Capps, SE NW SE sec. 10-20-28. Drlg. 3,525 ft.

Monroe County

J. H. Coker No. 1 McClain, NE NW sec 15-4n-2w. Drlg. 1,497 ft.

Nevada County

Uhle No. 1 Fuller, SE NE SE sec. 6-13-21. Loc.

Ouachita County

Copenhaver Oil Corp. No. 1 J. E. Evans sec. 20-11-19. S.D. 1,015 ft.
Tide Water-Seaboard Oil Co. No. 1 S. A. Graves Est., NW SE NW sec. 33-13-18. Drlg. 200 ft.

Pike County

Beckwith & Cress No. 1 Hendrick, NW SW sec. 16-8s-25w. T.D. 312 ft.; U.R.
Bruce E. Wallace and W. E. Neill No. 1 Tilyew, SE SE SE sec. 26-8-24. M.I.R.

Pulaski County

A. L. Kitselman No. 2 A. L. Kitselman, Jr., SE SE SW sec. 2-1s-13e. Drlg. 888 ft.

St. Francis County

Manning & Martin No. 1 R. C. Gregg, sec. 20-5n-5e. D.S. 3,332-3,479 ft.; S.W.; tstg.

Union County—Schuler

E. M. Jones et al No. 1 First Natl. Bank, NW NE NE sec. 19-18-17. Cg. 5,992 ft.
E. M. Jones et al No. 1 K. Gallagher, NW SW sec. 19-18-17. Drlg. 5,496 ft.
E. M. Jones et al No. 1 Marine Oil Co. fee, NW SW SE sec. 17-18-17. Drlg. 4,790 ft.
Ed. M. Jones et al No. 1 C. H. Murphy, NW Lot 6, NW¼ sec. 19-18-17. Cg. 5,943 ft.
Ed. M. Jones et al No. B-1 Murphy Land Co., SW SE NE sec. 13-18-18. T.D. 5,974 ft.; T.A.
Lion Oil Rfg. Co. No. A-1 M. D. Justiss, NE NW NE sec. 19-18-17. Tstg.; T.D. 5,600 ft.
Lion Oil Ref. Co. No. 2-A Edna Morgan, NW NE SW sec. 18-18-17. 7-in. cmtd. 5,803 ft.; T.D. 5,803 ft.
Lion Oil Ref. Co. No. 3-A Edna Morgan SE Lot 1, SW sec. 18-18-17. Cg. 5,590 ft.
Lion Oil Ref. Co. No. 2-B Morgan, NE NW SE sec. 18-18-17. T.D. 5,814 ft.; cmtd. csg.
Marine Oil Co. No. 1 fee, NW SW SW sec. 17-18-17. Tstg.
Marine Oil Co. No. 1 E. M. Jones, SW NW SW sec. 17-18-17. 7-in. 5,938 ft.; T.D. 5,960 ft.
Phillips Pet. Co. No. 1 E. Gan, SW SE NE sec. 18-18-17. Cg. 5,650 ft.
Phillips Pet Co. No. 2 E. Gan, SE SW NE sec. 18-18-17. Cg. 5,792 ft.
Phillips Pet. Co. No. 1 M. Justiss, SE Lot 6, NW sec. 18-18-17. Cg. 6,082 ft.
Phillips Pet. Co. No. 2 M. Justiss, NE

McGREGOR

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OUR aim is to satisfy our customers by supplying them with a complete line of equipment for pumping wells. Our line includes:

Brass, Steel and Cast Iron Working Barrels
New "MAC" Plunger Barrel
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Balls and Seats, etc.

Send for Booklet

McGREGOR WORKING BARREL COMPANY
Bradford, Pa., U.S.A.

Lot 2, SW sec. 18-18-17. Cg. 5,640 ft.
Sklar Oil Corp. No. 1 O. G. Murphy, SE NW SW sec. 24-17-16. 7-in. cmtd. 2,-147 ft.
Z. J. Spruiell No. 1 Justiss, NE NE SE sec. 7-18-17. Loc.
Alice Sydney Oil Co. No. 2 Morgan, sec. 18-18-17. Cg. 5,894 ft.

LOUISIANA

NORTH LOUISIANA PROVEN

Caddo—Rodessa

Blackwell O. & G. Co. No. 3 Neugent, sec. 8-23-16. 5-in. cmtd. 6,604 ft.; T.D. 6,-750 ft.
Clark Oil Corp. No. 2-A Sharp, SW SE sec. 4-23-16. T.D. 6,055 ft.; tstg. gas; W.O.
W. C. Feazel No. 1 Pitts, SE NE sec. 8-23-16-7. Tstg.
Holcomb & Thomasson No. 1 Dillon, SE sec. 4-23-16. Drlg. 4,791 ft.
Holcomb & Thomasson No. 1 Smith, SE sec. 4-23-16. 16-in. cmtd. 161 ft.
Magnolia Pet. Co. No. 1 D. F. Barr, NW S½ sec. 29-23-16. Drlg. 3,450 ft.
R. W. Norton No. 1 Payne, C SE SE sec. 27-23-16. T.D. 10,600 ft.; tstg.
R. W. Norton No. 11 Starke (a), NE sec. 17-23-16. Comp.; flw. 488 B.P.D.; T.D. 5,960 ft.
R. W. Norton No. 13 Starke, NW sec. 17-23-16. Drlg. 5,097 ft.
R. W. Norton No. 14 Starke, C sec. 16-23-16. R.U.
Roberts Drlg. Co. No. 1 E. G. Finley, NW sec. 1-23-16. Drlg. 2,875 ft.
Standard Oil of La. No. 2 J. W. Farmer, NW sec. 7-23-15. 7-in. 5,967 ft.; W.O.C.S.
Standard Oil of La. No. 1-B Emma J. Parker, SE NE sec. 9-23-16. Comp.; flw. 49 B.P.H.; T.D. 5,970 ft.
Standard Oil of La. No. 2 McCoy, sec. 10-23-16. Drlg. 276 ft.
Standard Oil of La. No. 2 O. A. Zylks, NE SE sec. 9-23-16. Comp.; flw. 37 B. P.H.; T.D. 5,950 ft.
Standard Oil of La. No. 2 S. G. Zylks, NW NW SW sec. 10-23-16. R.U.
Surf Oil Co. No. 1 Allison, NE sec. 8-23-16. Fsg. for swab; T.D. 6,050 ft.
United Gas No. 8 fee 574, NW cor. sec. 16-23-16. 7-in. 5,863 ft.; W.O.C.S.
United Gas No. 4 Starke, SE sec. 8-23-16. T.D. 5,970 ft.; tstg.

N. LOUISIANA WILDCATS

Bienville Parish

DeSota O. & G. Co. No. 1 Ashley, SW SE sec. 15-16-10w. T.D. 5,650 ft.; rng. 7-in.
Hunt Oil Co. et al No. 1 Bodcaw, SE sec. 30-14-5w. T.D. 7,784 ft.; D.&A.
Lide & Greer No. 2 Davis, NW NE sec. 12-16-5w. Drlg. 6,300 ft.
McDowell et al No. 1 Locke, NE cor. sec. 9-15-10. Fsg. 2,921 ft.

Bossier Parish

Arkansas-La. Gas Co. No. 2 T. Wilson, NW SW sec. 8-17-11. Drlg. 3,325 ft.
Triangle Drlg. Co. No. 1 C. Howell, NW sec. 26-17-12. 7-in. cmtd. 4,413 ft.; T.D. 5,180 ft.; W.O.C.S.
United Gas No. 2-A A. J. Murff, NE sec. 19-17-11. Drlg. 1,744 ft.
United Gas No. 1-B A. J. Murff, SW sec. 17-17-11. Drlg. 1,765 ft.

Caddo Parish

W. D. Chew No. 4 U. S. Govt. O.W.D.D.; sec. 5-20-16. Comp.; pmp. 110 B.P.D.; T.D. 2,331 ft.
C. L. Ferguson et al No. 1 Cooney, sec. 35-21-16. 4-in. cmtd. 2,204 ft.; T.D. 2,-240 ft.
W. J. Hunter et al No. 1 Stoer, NW SW NE sec. 10-15-15. P.B. and tstg.; T.D. 5,413 ft.; S.G.
Killam & Smith No. 3 J. J. Hart, SW sec. 29-21-16. Drlg. 960 ft.
Frank Perkins No. 1 Stiles, SW SW sec. 33-21-16. W.O.S.R.; T.D. 945 ft.
Prairie River Synd. No. 1 Hutchinson, SW NW sec. 15-15-12. Drlg. 8,239 ft.
J. J. Shulman No. 1 Bickham, NE sec. 28-21-5. T.D. 1,645 ft.; acd.; W.O.C.S.
Surf Oil Co. No. 1 Hyman, SE sec. 10-20-15. T.D. 2,210 ft.; swbg. S.W.
R. G. Trippett & D.C.K.O. No. 1 School Bd., NE sec. 16-19-14. Drlg. 2,448 ft.

Claiborne Parish

Atlantic Ref. Co. No. 3 King, E½ SE SE sec. 35-21-5. Drlg. 2,885 ft.
Atlantic Ref. Co. No. 4 F. B. King, W½ SE SE sec. 35-21-5. Loc.
Atlantic Ref. Co. No. 1 Tatum, N½ NE SE sec. 31-21-4. Loc.
Atlantic Ref. Co. No. 2 Tatum, S½ NE SE sec. 31-21-4. Drlg. 4,635 ft.
Gulf Ref. Co. No. 2 Henry, N½ NW ¼ sec. 31-21-4. Comp.; flw. 60 B.P.H.; T.D. 5,183 ft.
Gulf Ref. Co. No. 1 S. E. Tatum, SW cor. sec. 32-21-4. Drlg. 4,112 ft.
Harry Hanbury No. 1-C Vaughn, S½ SE SE sec. 25-21-5. R.U.
Harry Hanbury No. 1-D Vaughn, S½ SW SW sec. 30-21-4. Loc.
Harry Hanbury No. 1 R. Vaughn, S½ SW SE sec. 25-21-5. Drlg. 5,255 ft.
Hollifield & McFarland No. 3 M. Patton, E½ NW SE sec. 31-21-4. Drlg. 1,020 ft.
Love Bros. No. 1 J. J. Henry, S½ NE NE sec. 31-21-4. 7-in. 5,190 ft.; W.O.C.S.
Love Bros. No. 2 J. J. Henry, N½ NE NE sec. 31-21-4. Loc.
Lyons & Neely No. 1 Bean, W½ SE NE sec. 31-21-4. Comp.; flw. 40 B.P.H.; T.D. 5,280 ft.
Lyons & Neely No. 2 J. Bean, E½ SE NE sec. 31-21-4. Drlg.
L. O. McMillan No. 1-A McDonald, E½ NW NW sec. 31-21-4. Comp.; flw. 740 bbls. in 15 hrs.; T.D. 5,277 ft.
Magnolia Pet. Co. No. 4 English, N½ SW NE sec. 31-21-4. Drlg. 5,104 ft.
Magnolia Pet. Co. No. 5 English, N½ NE NW sec. 31-21-4. Drlg. 4,747 ft.
Magnolia Pet. Co. No. 3 H. E. Patton, W½ SW SW sec. 36-21-5. Drlg. 4,320 ft.
Olson Drlg. Co. No. 1 J. T. Bean, S½ NW NW sec. 32-21-4. Drlg. 2,020 ft.
Olson Drlg. Co. No. 1 T. F. Patton, SW C sec. 30-21-4. 10-in. 776 ft.
C. R. Schuster et al No. 2 M. S. Patton, S½ NW NE sec. 1-20-5. Comp. f;lw. 10 B.P.H.; T.D. 5,329 ft.
Sells Prod. Co. No. 1 J. Bean, W½ SW NW sec. 32-21-4. 10-in. 840 ft.
Sells Pet. Co. No. 1 W. Jones, W½ SE SE sec. 31-21-4. 5-in. cmtd. 5,302 ft.; T.D. 5,338 ft.; W.O.C.S.
Sloan & Zook Co. No. 1 Patton Est., NE NW sec. 1-20-5. R.U.
Shreveport Oil Corp. No. 1 Edwards, NE sec. 16-20-5w. Drlg. 5,325 ft.
Standard Oil of La. No. 3 F. B. King, NW SE sec. 35-21-5. Drlg. 100 ft.
J. C. Trippett Drlg. Co. No. 1 Aycock, N½ NE SE sec. 1-20-5. Rng. 7-in.; T.D. 5,380 ft.
United Gas No. 2 Brownfield, 660 ft. N and E, SW NW sec. 5-19-5w. Drlg. 3,-898 ft.
G. H. Vaughn No. 1 E. B. King, S½ SE SE sec. 30-21-4. Drlg.

Concordia Parish

Coastal Mineral & Dev. Co. No. 1 Winsten, sec. 23-7-9e. Drlg. 1,104 ft.

De Soto Parish

Clear Lake Oil Co. No. 1 J. A. Wollums, NW sec. 29-12-12. S.D. 600 ft.
Kennedy & Britewell No. 1 Redding, SE NE sec. 35-11-11. Drlg. 1,750 ft.
Ludel Oil Corp. No. 1 Gill, NE NE NW sec. 36-20-2w. Drlg.
J. F. McMannan No. 1 Cook Ld. Co., SE sec. 16-16-11. Drlg. 2,341 ft.
Paul Miller No. 1 R. A. Bafron, sec. 36-11-11. Cg. 2,958 ft.
Pullman Oil Co. No. 3 Ramsey, SE NE NW sec. 36-11-11. Cg. 2,944 ft.
Arthur D. Robinson No. 1 Allison, NW sec. 17-14-13. 10-in. cmtd. 48 ft.

Grant Parish

Rogers Oil Co. No. 3 Swope, SW SW sec. 17-9-1e. 6-in. cmtd. 1,514 ft.

Lincoln Parish

B. O. D. C. and H. D. Easton No. 1 G. W. Dye, NE NE sec. 21-19-4w. P.B. to 4,589 ft. to test.
Crown Central Pet. Co. No. 1 T. F. Patton, N½ SE NW sec. 6-20-4. Drlg. 5,-237 ft.
T. L. James No. 1 J. J. Spence, SW NE sec. 11-17-4. Drlg. 2,780 ft.
W. F. Lacey et al No. 1 Laura Canathers, W½ NW NE sec. 6-20-4. Drlg. 2,965 ft.
Ludel Oil Corp. No. 1 Gill, NE NE NW sec. 36-20-2w. Drlg.
Lyons & Neely No. 1 Aycock, S½ NW SW sec. 6-20-4. 5-in. 5,350 ft.; T.D. 5,387 ft.
Lyons & Neely No. 1 W. H. Patton, N½ SW NW sec. 6-20-4. Drlg. 1,015 ft.
Red Iron Drlg. Co. No. 1 Aycock, NW sec. 6-20-4. Drlg. 5,165 ft.

Red River Parish

W. J. Hunter No. 2 Long Bell Lbr. Co., SW NW sec. 20-19-9. 16-in. cmtd. 160 ft.
J. C. Prine No. 1 Haynes, SW sec. 20-13-10. S.D. 2,550 ft.
J. D. Wadley No. 1 McClelland. SE NE sec. 24-13-11. T.D. 2,550 ft.; D.&A.
Yandell & Rogers No. 4 Caspari, SW SE SW sec. 27-13-11. T.D. 2,462 ft.; arg. tst.

Sabine Parish

Arcadia Ref. Co. No. 2 Henderson, SE sec. 30-9-13. Comp.; flw. 61 B.P.D.; T.D. 1,775 ft.
Ellis Prod. Co. No. 1 Wright, NW SW sec. 4-5-12. Drlg. 2,510 ft.
Kirk-Green-Way Inc. No. 1 Whitney Corp., NW NE sec. 8-9-13. Drlg. 8,213 ft.
Remine et al No. 1 4-L Co., SW SW sec. 7-5-12. R.U.

Webster Parish

Magnolia Pet. Co. No. 2 G. W. Cole, NE NW NE sec. 27-21-10. 7-in. 8,114 ft.; T.D. 8,152 ft.
Magnolia Pet. No. 6 Ira Cox, NE NE SE sec. 23-21-10. Drlg. 7,967 ft.
Magnolia Pet. Co. No. 2 A. J. McCook, SW sec. 22-21-10. Drlg. 7,379 ft.
Ohio Oil Co. No. 47 Bodcaw Acct. 2, SW SE sec. 15-21-10. Drlg. 5,700 ft.
Ohio No. 1 S. P. D. Coyle and W. Cox, SW SW SE sec. 23-21-10. Drlg.
Ohio Oil No. 1 T. Crichton, Acct. No. 2, SE NE sec. 21-21-10. Drlg. 6,000 ft.
Ohio Oil No. 1 L. M. Gardner, NE sec. 22-21-10. Rng. 7-in.; T.D. 8,329 ft.
Ohio No. 7-B R. L. Hollowav, 586 ft. N. 756 ft. E line, sec. 23-21-10. Fsg. 5,527 ft.
A. G. Olinhant et al No. 1 Banks, NE NE sec. 34-21-10. Drlg. 5,031 ft.
L. R. Skidmore No. 1 Barnett, NE NW SW sec. 29-17-9. T.D. 3,785 ft.; S.D.
Standard Oil of La. No. 1 E. L. Stewart, SE SE SE sec. 32-21-10. Drlg. 8,319 ft.
Woodley Pet. Co. No. A-2 L. C. Cox, SW NE sec. 22-21-10. Drlg. 8,064 ft.

Winn Parish

Georgetown Oil Co. No. 1 Tremont, sec. 19-10-1e. Drlg. 1,525 ft.

SOUTH LOUISIANA FIELDS

Abbeville—Vermilion Parish

Continental Oil Co. No. 1 Brookshire, sec. 66-12s-3e. 18⅝-in. csg. 237 ft.; 13⅜-in. csg. 2,125 ft.; drlg. sd. 9,460 ft.; gas sd. 7,575-95 ft.; drlg. sh. 10,206 ft.

Bay St. Elaine—Terrebonne Parish

F. J. LeBlanc et al No. 1 Wurzlow, sec. 17-22s-18e. T.D. 10¾-in. csg. 1,008 ft.; bailed S.W.; tried to blow out; hole bridged; bailing; showing some oil.
Texas Co. No. 14 State, sec. 20-22s-18e. Drlg. sh.&sd. 5,588 ft.

Bayou Blue—Iberville Parish

Humble O. & R. Co. No. 3 Wilbert, sec. 74-9s-10e. Drlg. Anhy. 2,878 ft.

Bayou Cocotrix—Terrebonne Parish

Shell Pet. Corp. No. 1 Pelican, sec. 35-17s-15e. Drlg. sdy. sh. 10,331 ft.
Shell Pet. Corp. No. 2-B Realty Operators, sec. 18-17s-15e. 10¾-in. csg. 2,481 ft.; 7-in. csg. 7,473 ft.; T.D. 9,513 ft., sd.; S.O.; make D.S.T.

Big Lake—Cameron Parish

Union Sulphur Co. No. 1 Henry Hebert, sec. 18-12s-8w. Core sh. 8,413 ft.
Union Sulphur Co. No. 1 P. J. Herbert, sec. 18-12s-8w. Drlg. sd.&sh. 7,519 ft.

Black Bayou—Calcasieu Parish

Shell Pet. Corp. No. 38 Watkins. Drlg. sd.&L. 2,922 ft.

Caillou Island—Terrebonne Parish

Texas Co. No. 50 State, sec. 19-23s-20e. T.D. 4,857 ft.; P.B. 3,235 ft.; sdtrkd.; drlg. sd.&L. 4,761 ft.

Cameron Meadows—Cameron

Magnolia-Humble O. & R. Co. No. 20 Cameron Meadows, sec. 21-14s-13w. Drlg. sh. 3,812 ft.

Charenton—St. Mary Parish

Pan American Prod. Co. No. 1 Landry, sec. 25-13s-9e. Drlg. sh. 7,023 ft.
Pan American Ref. Co. No. 4 Laws Realty Co., sec. 30-13s-10e. Drlg. sd.&sh. 5,-888 ft.
Pan American Prod. Co. No. 1 Veeder, sec. 30-13s-10e. Drlg. sh. 7,545 ft.

Choctaw—Iberville Parish

Standard Oil Co. No. 10 Grove, sec. 52-9s-11e. Drlg. sdy. sh. and shell 5,192 ft.
Standard Oil Co. No. 6 Gay, sec. 52-9s-11e. T.D. 4,709 ft.; P.B. and sdtrkd.; drld. to 4,415 ft.; swbg. S.W.; trace of oil.

Darrow—Ascension Parish

Humble O. & R. Co. No. 10 Darrow. Core sd. 6,874 ft.
Kiva Oil Co. No. 1 Duplessis, sec. 69-10s-2w. R.U.

Dog Lake—Terrebonne Parish

Texas Co. No. 5 State, sec. 5-22s-16e. 10¾-in. csg. 1,505 ft.; T.D. 7,231 ft.; P.B. 6,310 ft.; to sdtrk.; T.D. 7,028 ft.; 7⅝-in. csg. 6,868 ft.; I.P. 1,481 B.P.D.; ⅝-in. ck.

Fausse Point—Iberia Parish

Texas Co. No. 3 State, sec. 35-11s-8e. 10¾-in. csg. 1,245 ft.; core L.&sh. 4,483 ft.

Four Isle—Terrebonne Parish

Texas Co. No. 9 L.L.&E., sec. 24-21s-16e. Drlg. sd. 5,684 ft.

Garden Island—Plaquemines Parish

Texas Co. No. 22 State, sec. 37-23s-33e. Core sh. 3,842 ft.

Gillis—Calcasieu Parish

Fohs Oil Co. No. 19 Castle, sec. 13-9s-8w. 7-in. csg. 7,051 ft.; T.D.
Union Sulphur Co. No. 3 Bel, sec. 2-9s-8w. Drlg.
Union Sulphur Co. No. 6 Kaufman, sec. 13-9s-8w. Drlg. sh. 5,012 ft.

Gueydan—Vermilion Parish

Pure Oil Co. No. 6 Mulney Investment Co., sec. 34-11s-1w. 10¾-in. csg. 1,049 ft.; T.D. 4,300 ft.; P.B. 4,196 ft.; tstd. S.W.; make squeeze job.

Hackberry—Cameron Parish

Burton-Sutton Joint Interest No. 2 A. Portie, sec. 22-12s-10w. Drlg. sh. 1,290 ft.
W. T. Burton No. 3 Lewis, sec. 22-12s-10w. R.U.
W. T. Burton Oil Co. No. 1 Henry, sec. 22-12s-10w. Drlg.
W. T. Burton No. 4 Vincent, sec. 22-12s-10w. Drlg. sh. 3,012 ft.
Stanolind O. & G. Co. No. 1-B Duhon, sec. 27-12s-10w. T.D. 6,233 ft.; P.B.
Stanolind O. & G. Co. No. 5 Duhon, sec. 22-12s-10w. 10¾-in. csg. 1,306 ft.; drlg. sh. 4,212 ft.
Stanolind O. & G. Co. No. 8 Carter & Sweeney, sec. 22-12s-10w. R.U.
Stanolind O. & G. Co. No. 9 Carter & Sweeney, sec. 22-12s-10w. Drlg. sh. 4,-290 ft.
Stanolind O. & G. Co. No. 4 Lacey, sec. 27-12s-10w. R.U.
Stanolind O. & G. Co. No. 19 School Land, sec. 16-12s-10w. 10¾-in. csg. 1,942 ft.; T.D. 5,990 ft.; fsg.
Stanolind O. & G. Co. No. 52 State, sec. 22-12s-10w. Drlg. sh. 3,888 ft.
Texas Co. No. 22-B State, Twp. 12s-9w. T.D. 7,628 ft.; 7-in. csg. 7,628 ft.; tstg.
Union Sulphur Co. No. 9 Doiron, sec. 37-12s-10w. Drlg. sh.; no report.

Iowa—Jefferson Davis Parish

Shell Pet. Corp. No. 27 Heyd, sec. 40-13s-9e. Drlg. sh. 3,209 ft.

Jeanerette—St. Mary Parish

Herton Oil Co. No. 1 Banta, sec. 40-13s-9e. 9⅝-in. csg. 7,030 ft.; T.D. 9,765 ft.; P.B. and sdtrkd.; drlg. sdy. sh. 8,812 ft.
Herton Oil Co. No. 8 Carter, sec. 44-13s-9e. Drlg. sh. 7,937 ft.

Jennings—Acadia Parish

Frank W. Bennett et al No. 1 Brethern and Christ Church, sec. 41-7s-2w. T.D. 4,875 ft.; P.B. 4,450 ft.; W.O.C.
W. T. Burton Oil Co. No. 2 J. J. Roboris sec. 42-9s-2w. T.D. 7,093 ft.; I.P. 550 B.P.D.; ¼-in. ck.
Cosmo Pet. Co. No. 1 M. E. Crusel, sec. 42-9s-2w. T.D. 1,950 ft.; tstd. S.W. 1,260-68 ft.; S.D.
Cosmo Pet. Co. No. 1 Jenning Heywood, sec. 41-9s-2w. Drlg. sh. 3,312 ft.
D. D. Feldman et al No. 1 McFarlain, sec. 41-9s-2w. Drlg. sh. 4,857 ft.
Glassell No. 1 Bourgeaux, sec. 41-9s-2w. Drlg. sh. 4,912 ft.
Glassell No. 3 Trushell, sec. 42-9s-2w Drlg. sh. 5,670 ft.
La. Crusader No. 108 Houssiere Latreille, sec. 47-9s-2w. Drlg. sh. 2,437 ft.
Louisiana Crusader Oil Co. No. 1 Heywood, Martin Campbell Sur., sec. 42 9s-2w. 20-min. D.S.T. 3,818-30 ft. recvd. 22 stands of oil.
Port City Oil Co. No. 2 Jennings-Heywood, sec. 41-9s-2w. T.D. 2,050 ft.; 5⅝-in. csg. 2,034 ft.
Reiter-Foster Oil Co. No. 1 M. C. Crusel et al, sec. 42-9s-2w. Drlg. sh. 3,640 ft.
Stanolind O. & G. Co. No. 11 Crowley, sec. 48-9s-2w. Drlg. L. 2,781 ft.
Superior Oil Co. No. 5 Leckelt, sec. 42-9s-2w. R.U.
Superior Oil Co. No. 6 Leckelt, sec. 42-9s-2w. Drlg. sd. 6,510 ft.
Superior Oil Co. No. 2 Moresi, sec. 41-9s-2w. Drlg. sh. 4,957 ft.
Superior Oil Co. No. 3 Moresi, sec. 41-9s-8w. Drlg. sh., 1,471 ft.

Lirette—Terrebonne Parish

Humble O. & R. Co. No. 1 Wurzlow, sec. 32-19s-19e. R.U.

Lafitte—Jefferson Parish

Texas Co. No. 4 Lafitte (O.W.D.D.), sec. 20-17s-24e. Stuck D.S.: sdtrkd. at 9,410 ft.; T.D. 10,092 ft.; oil sd.; 5¾-in. csg. 10,092 ft.; W.O.C.
Texas Co. No. 2 Milling, sec. 20-17s-24e. T.D. 5,195 ft.; rmg.
Texas Co. No. 1 State-Bayou Norman sec. 28-17s-24e. T.D. 9,725 ft.; run 7⅝-in. csg.

Lake Hermitage—Plaquemines Parish

Gulf Ref. Co. No. 7 Lafourche, sec. 12-18s-25e. Drlg. sd.&sh. 5,555 ft.

Lake Washington—Plaquemines Parish

Humble O. & R. Co. No. 25 Cockrell, sec. 35-20s-26e. Drive piling.

Lake Pelto—Terrebonne Parish

Texas Co. No. 17 State, sec. 17-23s-18e. Core sd. S.O. 6,551 ft.

Leesville—Lafourche Parish

Texas Co. No. 42 Leesville, sec. 27-21s-22e. Core sh. 4,095 ft.
Texas Co. No. 67 Leesville, sec. 27-21s-22e. Core sdy. sh.; S.O. 3,502 ft.

Lockport—Lafourche Parish

Magnolia Pet. Co. No. 6 Freeburg, sec. 8-19s-9w. T.D. 6,397 ft.; 7-in. csg. 6,898 ft.; flwd. 325 bbls. first 12 hrs.; ¼-in. ck.; started making S.W.; cmtd. bttm. 29 ft.; tstg. 6,898-6,908 ft.

Long Lake—Lafourche Parish

Fohs Oil Co. No. 2 State, sec. 65-17s-19e. R.U.

LEGAL

U. S. Department of the Interior, General Land Office, Washington, D. C. Notice is hereby given that Unit No. 3, embracing NW¼ of SE¼ Sec. 5, T. 23 N., R. 15 W., 28.93 acres; Unit No. 4, SW¼ of NE¼ Sec. 2, T. 23 N., R. 16 W., 27.96 acres; Unit No. 5, W½ of E½, NE¼ of NW¼ Sec. 3, T. 23 N., R. 16 W., 138.13 acres; and Unit No. 6, SW¼ of SE¼ Sec. 9. T. 23 N., R. 16 W., 39.95 acres, in the Rodessa Oil and Gas Field, Caddo Parish, Louisiana, subject to consolidation if awarded to same bidder, are offered to the responsible qualified bidders of the highest bonus per acre under section 17 of the leasing act of February 25, 1920 (41 Stat. 437), as amended by the act of August 21, 1935 (49 Stat. 674), at the royalty rate scale in the lease form shown in Circular 1386, at a sale to be held in the Federal Court Room, Post Office Building, Shreveport, Louisiana, at 12:00 noon, on September 3, 1937. The successful bidder must deposit on the day of the sale a certified check on a solvent bank, or cash, for one-fifth of the amount of each bid and file the showing of qualifications to receive a lease required by section 7 of General Land Office Circular 1386. The remaining four-fifths, together with the annual rental in advance at the rate of $1 per acre must be paid prior to the issuance of the lease. The bidders are warned against violation of the provisions of section 59 of the United States Criminal Code approved March 4, 1909, prohibiting unlawful combination or intimidation of bidders. The right is reserved to reject any and all bids at the discretion of the Secretary of the Interior. Fred W. Johnson, Commissioner.

New Iberia—Iberia Parish

Wm. Hellis No. 3 Schwing, sec. 57-12s-7e. T.D. 5,019 ft.; P.B. and sdtrkd.; drlg. 3,756 ft.

Texas Co. No. 3 Bryant, sec. 25-12s-7e. Drlg. 2,312 ft.

Wm. Hellis No. 9 Bernard, sec. 54-12s-7e. T.D. 5,073 ft.; drlg. in sdtrkd. hole 3,256 ft.; no report.

Wm. Hellis No. 10 Bernard, sec. 54-12s-7e. R.U.

Wm. Hellis No. 6 Bullock-Burke, sec. 25-12s-7e. Drlg. sh.&L. 1,507 ft.

Texas Co. No. 3 Coleste, sec. 25-12s-7e. R.U.

Texas Co. No. 3 Duhe, sec. 26-12s-7e. T.D. 4,127 ft.; D.S. stuck.

Texas Co. No. 6-B Hanzen, sec. 54-12s-7e. Core sh. 4,281 ft.

Texas Co. No. 1 Schwing, sec. 71-12s-7e. Drlg. sh. 6,668 ft.

Roanoke—Jefferson Davis Parish

Humble O. & R. Co. No. 6 Kratzer, sec 11-9s-4w. T.D. 8,704 ft.; perf. csg. 8,706-08 ft.; installing flow valves.

South Roanoke—Jeff Davis Parish

Union Sulphur Co. et al No. 1 T.R.S. Farms Co., sec. 23-10s-4w. 12½-in. csg. 1,835 ft.; core sd. 8,644 ft.

Starks—Calcasieu Parish

Turnbull et al No. 2 Industrial Lbr. Co., sec. 19-9s-12w. Core 4,169 ft.

Sulphur—Calcasieu Parish

Union Sulphur Co. No. 846 fee, sec. 29-9s-10w. T.D. 5,392 ft.; P.B. 5,275 ft.; swbg.; no report.

Union Sulphur Co. No. 847 fee, sec. 29-9s-10w. T.D. 4,875 ft.; P.B. to sdtrk. at 2,555 ft.; no report.

St. Martinsville—St. Martin Parish

Tide Water Oil Co. No. 5 Smedes, sec. 57-11s-6e. Spd.

Tepetate—Acadia Parish

Continental Oil Co. No. 3-D Homeseekers Dev. Co., sec. 34-7s-2w. Drlg. sh. 8,294 ft.

Continental Oil Co. No. 2-B Veronie, sec. 28-7s-2w. T.D. 8,302 ft.; 5¾-in. csg. 8,302 ft.; W.O.C.; I.P. 155 B.P.D.; 9/64-in. ck.

Valentine—Lafourche Parish

Pan American Prod. Co. No. 7 Harang, sec. 7-17s-20e. Drlg. sh. 6,682 ft.

Pan American Prod. Co. No. 8 Harang, sec. 9-17s-20e. Drlg. sdy. sh. 6,465 ft.

Pan American Prod. Co. No. 9 Harang, sec. 9-17s-20e. Drlg. sh. 3,521 ft.

Vinton—Calcasieu Parish

Katina Oil Co. No. 1 Vincent, sec. 34-10s-12w. 8-in. csg. 1,108 ft.; T.D. 3,236 ft.; 7-in. csg. 3,236 ft.; swbg.

Superior Oil Co. No. 1 Gray, sec. 4-11s-12w. Drlg. sh. 1,906 ft.

S. LOUISIANA WILDCATS

Acadia Parish

H. E. Dalton No. 1 Setting, sec. 17-7s-1w. Drlg. shly. sd. 3,058 ft.; corrected.

Humble O. & R. Co. No. 1 Flood Williams, sec. 34-8s-1e. Drlg. sh. 8,877 ft.

T. S. Markley No. 1 Daigle, sec. 19-7s-2e. Drk.

J. G. Mayo et al. No. 1 Bank of Commerce, sec. 19-7s-1e. 10¾-in. csg. 1,710 ft.; S.D. 9,008 ft.

Allen Parish

Humble O. & R. Co. No. 3 Bel, located in cratered hole, sec. 26-6s-7w. 10¾-in. csg. 165 ft.; T.D. 2,870 ft.; 7-in. csg. 2,766 ft.; shot well; failed to stop flwg. S.W.; S.D.

Avoyelles Parish

Coastal Mineral Co. No. 1 Purdy Hess, sec. 25-2n-3e. Drlg. sh.&L. 5,020 ft.

Calcasieu Parish

D. & D. Oil Co. No. 2 Lutcher-Moore, sec. 1-8s-13w. Spd.

Stanolind O. & G. Co. No. 1 Prairie Ld. & Canal Co., sec. 10-11s-9w. Drlg. sh. 6,781 ft.

Cameron Parish

Humble O. & R. Co. No. 1 Hanzen, sec. 5-12s-6w. 13⅜-in. csg. 3,046 ft.; drlg. sh. 9,389 ft.

Pure Oil Co. No. 2 State, sec. 14-13s-3w. Drlg. sdy. sh.&shells 5,681 ft.

Southern Sulphur Co. No. 2 State, sec. 29-15s-10w. S.D. 2,611 ft.

Cameron Parish—Gulf of Mexico

Superior Oil Prod. Co. et al No. 1 State-Gulf of Mexico, 3,800 ft. W, 6,200 ft. S of SE cor. of irregular sec. 4-15s-8w Driving piling.

East Baton Rouge Parish

Cavalier Oil Co. No. 1 Elliott, sec. 3-8s-2e. 10¾-in. csg. 1,950 ft.; T.D. 6,127 ft.

Louisiana Crusader Oil Co. No. 2 Louisiana State. 10¾-in. csg. 2,182 ft.; drlg. L. 8,317 ft.

Evangeline Parish

Continental Oil Co. No. 1 Tate, sec. 44-3s-2e. Drlg. sh. 6,853 ft.

Schlicher Prod. Co. No. 1 Denois Ld. & St. Stone Co., sec. 35-3s-1w. Drk.

Iberia Parish

Jefferson Lake Oil Co. No. 414 State Lake Pigneur, Twp. 12s-5e. Top salt 990 ft.; set 10¾-in. csg. 5,095 ft.; top oil sd. 6,915 ft.; 7-in. csg. 6,930 ft.; cd. salt 7,060 ft.; T.D. 7,069 ft.; 5-in. csg. 6,686 ft.; drlg. plug.

Jefferson Parish

Triangle Oil Co. No. 1 Conroe, sec. 125-12s-11e. Drlg. sh.&L. 3,270 ft.

Jefferson Davis Parish

Stanolind O. & G. Co. No. 2-B Calcasieu Natl. Bank, sec. 28-7s-3w. 13⅜-in. csg. 1,950 ft.; T.D. 9,100 ft.; 7-in. csg. 9,089 ft.; drlg. sh. 9,267 ft.

Lafourche Parish

Gulf Oil Corp. No. 3 State, sec. 36-23s-21e. 13⅜-in. csg. 1,455 ft.; drlg. sh. 4,935 ft.

Livingston Parish

Grubb et al No. 1 Evans, sec. 47-7s-2e. Drlg. sh. 6,601 ft.

Plaquemines Parish

Humble O. & R. Co. No. 1 Orleans Levee Bd., sec. 11-18s-15e. Top Cap Rk. 804 ft.; abd.

Humble O. & R. Co. No. 2 Orleans Levee Bd., sec. 11-18s-15e. Drlg. sd.&L. 845 ft.

Humble O. & R. Co. No. 3 Orleans Levee Bd., sec. 10-18s-15e. Spd.

Rapides Parish

R. D. Webb No. 1 A. M. Brasher, sec. 22-4n-2w. S.D. 5,236 ft.

St. Bernard Parish

Southern Sulphur Co. No. 2 State Lake Borgne, sec. 38-14s-15e. 13⅜-in. csg. 303 ft.; S.D. 3,440 ft.

St. Charles Parish

Amerada Pet. Corp. and La. Ld. & Expl. Co. No. 1 State, sec. 13-15s-20e. Cd. oil sd. 6,828-95 ft.; T.D. 7,124 ft.; 9⅝-in. csg. 7,118 ft.; top salt 8,632 ft.; rng. survey; P.B. 6,855 ft.; perf. csg. 6,820-30 ft.; rec. 690 ft. oil and 240 ft. of S.W.; squeezed off perf.; W.O.C.

St. Landry Parish

Gulf Oil Corp. No. 1 Haas & Hirsch, sec. 12-6s-1e. Drlg. sd. 7,437 ft.

St. Martin Parish

Texas Co. No. 3 State, sec. 14-10s-9e. cmtd. on bttm.; T.D. 8,208 ft.; top salt 8,175 ft.; P.B. 7,600 ft.; top of cmt. plug 7,674 ft.; sdtrkd.; drld. into old hole at 7,800 ft.; P.B. 7,652 ft.; sidetrack 7,794 ft.; recovered mud on drill stem 7,826-50 ft.; cd. to 7,852 ft.; P.B. to sdtrk. at 5,740 ft.; drlg. sh. 6,619 ft.

St. Mary Parish

Texas Co. No. 1 Horse Shoe Bayou, sec. 40-17s-9e. T.D. 10,975 ft.; 7⅝-in. csg. 18-in. csg. 101 ft.; T.D. 12,261 ft.; blew out; caught fire; burned for 1 hr. and hole bridged; drlg. by jnk. at 11,253 ft. stuck drill pipe; P.B. and sdtrkd.; T.D. 11,324 ft.; 7⅝-in. csg. 10,975 ft.; perf. csg. 10,870-90 ft.; rec. 100 ft. oil, 90% S.W. at 8,818 ft.

Texas Co. No. 1 State-Bateman Lake, sec. 21-16s-12e. T.D. 10,541 ft.; D.S. stuck at 9,070 ft.; fsg.

Vernon Parish

Castor Creek Drlg. Co. No. 1 Llano Del Rio, Inc., sec. 34-2n-9w. Drk.

George Greer et al No. 1 Commercial Natl. Bank, sec. 9-1s-8w. T.D. 5,019 ft.; abd.

TEXAS

Week Ending July 31

GULF COAST FIELDS

Danbury—Brazoria County

Rowan Drlg. Co. No. 1 Jamison, Henry Austin Sur. 10¾-in. csg. 1,496 ft.; drlg. sh. 4,950 ft.

Hastings—Brazoria County

Humble O. & R. Co. No. 1 Alexander, H. T.&B. Sur. No. 28. Drk.

Humble O. & R. Co. No. 1 C. A. Borders, Perry & Austin Sur. Drlg. sh. 4,304 ft.

Humble O. & R. Co. No. 10-A Brown, W. M. Snyder Sur. Drlg. sh. 2,960 ft.

Humble O. & R. Co. No. 4 Haden, R. Hoppell Sur. T.D. 6,108 ft.; W.O.C.

Humble O. & R. Co. No. 1 J. Mason, C Lot 13, H.T.&B. Sur. No. 29. T.D. 6,029 ft.; 5½-in. csg. 5,750 ft.; I.P. 646 B.P.D.; ¼-in. ck.

Humble O. & R. Co. No. 2 South Texas Grain Co., Perry & Austin Sur. T.D. 6,125 ft.; 5½-in. csg. 6,109 ft.; I.P. 137 B.P.D.; ¼-in. ck.

Humble O. & R. Co. No. 5 South Texas Grain Co., Perry & Austin Sur. Drlg. sh.&L. 4,771 ft.

Navarro Oil Co. No. 1-C Beers, Perry & Austin Sur. T.D. 6,065 ft.; 7-in. csg. 6,025 ft.; I.P. 553 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 4 Autrey, H. T.&B. Sur. No. 37. T.D. 6,080 ft.; run 7-in. csg.

Stanolind O. & G. Co. No. 1 Baker, Perry & Austin Sur. Drlg. sh. 4,461 ft.

Stanolind O. & G. Co. No. 1 Barnett. T.D. 6,155 ft.; wtr. sd.; 7-in. csg. 6,139 ft.

Stanolind O. & G. Co. No. 1 Condon, sec. 29, H.T.&B. Sur. T.D. 6,080 ft.; 7-in. csg.

Stanolind O. & G. Co. No. 6 Curkett, H. T.&B. Sur. No. 30. 7-in. csg. 5,833 ft.; I.P. 532 bbls. in 19 hrs.; T.D. 5,976 ft.; ¼-in. ck.

Stanolind O. & G. Co. No. 7 Curkett, H. T.&B. Sur. No. 30. 10¾-in. csg. 1,231 ft.; W.O.C.

Stanolind O. & G. Co. No. 1 DeWitt. T.D. 6,145 ft.; W.O.C.

Stanolind O. & G. Co. No. 1 Drury, H.T. &B. Sur. Drlg. sd. 5,914 ft.

Stanolind O. & G. Co. No. 7 Grote, A.C. H.&B. Sur. No. 2. T.D. 6,080 ft.; 7-in. csg. 5,965 ft.

Stanolind O. & G. Co. No. 8 Grote, A.C. H.&B. Sur. Drlg. sd. 5,507 ft.

Stanolind O. & G. Co. No. 1 Kay, H.T.& B. Sur. No. 29. T.D. 6,160 ft.; I.P. 633 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 2 Legare, H.T. &B. Sur. No. 29. Drlg. sd. 2,000 ft.

Stanolind O. & G. Co. No. 2 Miller, H.T. &B. Sur. No. 29. Drlg. L. 3,970 ft.

Stanolind O. & G. Co. No. 8 Paul, A.C. H.&B. Sur. 10¾-in. csg. 1,234 ft.; T.D. 6,080 ft.; I.P. 570 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 9 Paul, A.C.H. &B. Sur. No. 2. Drlg. sd. 675 ft.

Stanolind O. & G. Co. No. 12 Paul, A.C. H.&B. Sur. No. 2. T.D. 6,080 ft.; 7-in. csg. 5,945 ft.; I.P. 555 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 13 Paul, A.C. H.&B. Sur. No. 2. R.U.

Stanolind O. & G. Co. No. 2 Reichardt, H.T.&B. Sur. No. 29. T.D. 6,080 ft.; 7-in. csg. 5,875 ft.

Stanolind O. & G. Co. No. 1-B Stockwell, Stevens Sur. T.D. 6,198 ft.; wtr. sd.; abd.

Stanolind O. & G. Co. No. 1 Shyrock, H. T.&B. Sur. No. 29. T.D. 6,080 ft.; 7-in. csg. 5,922 ft.

Stanolind O. & G. Co. No. 1 Sparks, H.T. &B. Sur. No. 29. Drlg. sh. 4,125 ft.

Stanolind O. & G. Co. No. 9 Turner, A.C. H.&B. Sur. No. 1. Drlg. sh. 3,931 ft.

Stanolind O. & G. Co. No. 1 Winston, H. T.&B. Sur. No. 29. R.U.

Lockridge—Brazoria County

Gulf Oil Corp. No. 1 Stevens, J. W. Hall Sur. Drlg. sh. 5,582 ft.

Gulf Oil Corp. No. 2 Baker, J. W. Hall Sur. Drlg. sh. 5,181 ft.

Gulf Oil Corp. No. 5-A Wilkes & Smith, J. W. Hall Sur. Drlg. sh. 5,582 ft.

Gulf Oil Corp. No. 2-A Wood, J. W. Hall Sur. T.D. 6,377 ft.; 7-in. csg. 6,360 ft. P.B. 6,368 ft.; W.O.C.

Kirby Pet. Co. No. 1 Baker, J. W. Hall Sur. Drlg. sh. 4,250 ft.

Dr. C. M. Lusk No. 1 Ramsey State Farm, J. W. Hall Sur. R.U.

Shell Pet. Corp. No. 1-B Ramsey, J. W. Hall Sur. Drlg. sh. 2,430 ft.

Manvel—Brazoria County

Texas Co. No. 17-A Belcher, H. N. Little Sur. Drlg. sh. 4,090 ft.

Texas Co. No. 27 H.O.F.A., A.C.H.&B. Sur. Drlg. sh.&L. 5,364 ft.

Old Ocean—Brazoria County

Harrison & Abercrombie No. 1 Larsen, C. Breen Sur. Drlg. sh. 8,337 ft.

Harrison and Abercrombie No. 4 Bernard River Ld. and Development Co., Charles Breen Sur. 13⅜-in. csg. 1,405 ft.; 9⅝-in. csg. 7,005 ft.; T.D. 10,408 ft.; 7-in. csg. 10,400 ft.; T.D. 10,775 ft.; 5-in. lnr. stuck at 10,522 ft.; perf. csg. 10,396-10,401 ft.; I.P. 11 bbls. of fluid per hr.; still cleaning; no gauge.

Sandy Point—Brazoria County

Stanolind O. & G. Co. No. 1 Fite, D. Talley Sur. T.D. 6,500 ft.; run 5¾-in. csg.

Stratton Ridge—Brazoria County

A. B. Head et al No. 1 Seeburn Est., J. E. Groce Sur. Drlg. sh. 2,612 ft.

West Columbia—Brazoria County

Texas Co. No. 16 Abrams, G. Tenille Sur. 10¾-in. csg. 1,187 ft.; drlg. sdy. sh. 3,955 ft.

Texas Co.-Sterling O. & R. Co. No. 2 Phillips, G. Tenille Sur. 10¾-in. csg. 1,196 ft.; drlg. sd. 4,319 ft.

Calhoun—Heyser—Victoria County

Geo. Echols No. 1 Lander, Galban Sur. Drlg. sh. 5,040 ft.

Humble O. & R. Co. No. 1 P. H. Marshall A. Sisneros Sur. T.D. 6,200 ft.; perf. csg. 5,473-84 ft.; completing.

Humble O. & R. Co. No. 9 E. H. Welder, J. M. Rios Sur. T.D. 5,450 ft.; 5½-in. csg. 5,444 ft.; I.P. 11 B.P.H.; ¼-in. ck.

Humble O. & R. Co. No. 17-A P. H. Welder, J. M. Rios Sur. Drlg. sdy. sh. 1,017 ft.

Magnolia Pet. Co. No. 1 Lander, Galban Sur. R.U.

Normandie Oil Co. No. 1 J. G. Cook, A. Sisneros Sur. T.D. 5,491 ft.; 7-in. csg. 5,491 ft.; perf. csg. 5,476-85 ft.; flwg. gas and dist.

Portilla Drilling Co. No. 8-C P. H. Welder, A. Sisneros Sur. T.D. 5,470 ft.; 7-in. csg. 5,470 ft.; I.P. 173 B.P.D.; 9/64-in. ck.

Sinclair Prairie Oil Co. No. 1 W. H. Bennett, A. Sisneros Sur. Drlg. 4,000 ft.

Sun Oil Co. No. 1 Coffey, J. Gabban Sur. Loc.

Anahuac—Chambers County

Gulf Oil Corp. No. 1 Shephrett, sec. 46, H.&T.C. Sur. Drlg. sh. 7,118 ft.

Humble O. & R. Co. No. 12 Clark, H.&T. C. Sur., sec. 57. T.D. 7,085 ft.; I.P. 681 B.P.D.; ¼-in. ck.

Humble O. & R. Co. No. 13 Gripon, sec. 51, H.&T.C. Sur. T.D. 7,115 ft.; run csg.

Humble O. & R. Co. No. 14 Gripon, sec. 51, H.&T.C. Sur. T.D. 7,080 ft.; run csg.

Humble O. & R. Co. No. 10 Johnson, sec. 47, H.&T.C. Sur. T.D. 7,110 ft.; I.P. 680 B.P.D.; ¼-in. ck.

Cotton Lake—Chambers County

Salt Dome Oil Corp. and Gulf Oil Corp.

Just Cleaned Out WITH A MILLER

MEANS EXTRA $$$ IN Your POCKET

Because the MILLER Sand Pump cleans out sand and sediment in your wells permitting free flowing of the oil.

The MILLER is made in diameters of 2½, 3, 3½, 4, 4¼, 5, 5½, 7 and 9 inches and lengths of 20, 25 and 30 feet. 5/32-inch wall thickness in REGULAR Type. ¼-inch wall tubos HEAVY Type Sand Pumps.

INTERCHANGEABLE BOTTOMS
To Meet Every Condition

● BAILER BOTTOM
With the Bailer Bottom installed the MILLER is quickly changed to a Bailer giving you a combination of either Bailer or a Sand Pump in one tool.

● SAND BOTTOM
Used when tools are run and when well is shot to quickly remove loose material.

● STAR BOTTOM
Used for cutting the sand loose.

● CHISEL BOTTOM
(In Pump)
With this bottom tightly packed sand can be easily broken in small pieces so it can be picked up in the pump.

Write for Descriptive Folder and Price List

See Page 1186 COMPOSITE CATALOG

PATENTED NO. 1370340 NO. 1523604 NO. 1707380 NO. 1862628 NO. 1866828 NO. 2055667

MILLER Sand Pump Co.

General Offices and Shop, Box 4516
OKLAHOMA CITY, OKLA., U. S. A.

Branch Shops and Offices:
SAPULPA, OKLA. and KILGORE, TEX.

FOR SALE BY SUPPLY STORES EVERYWHERE

No. 1 A. B. Lawrence, B. Winfree Sur. 9⅝-in. csg. 1,169 ft.; T.D. 6,622 ft.; P.B. 6,515 ft.; 5½-in. csg. 6,505 ft.; failed to flow steady; install flow valves; I.P. 8 B.P.H.; 11/64-in. ck.
Salt Dome Oil Co. No. 1-E Lawrence, Winfree Sur. R.U.

Seabreeze—Chambers County

Sun Oil Co. No. 2 H. O. Acom, H.T.&B Sur. No. 23. 18⅝-in. csg. 91 ft.; T.D. 8,795 ft.; D.S. stuck; cutting and pulling csg.
Sun Oil Co. No. 1 Jackson, Yarbo Sur. T.D. 8,570 ft.; 9⅝-in. csg. 8,535 ft.; set lnr.; swbd. 100% S.W.

Turtle Bay—Chambers County

Stanolind O. & G. Co. No. 3 Middleton, Carroll Sur. R.U.
Stanolind O. & G. Co. No. 1 Morrisey, M. A. Carroll Sur. Drlg. sh. 3,632 ft.
Sun Oil Co. No. 5 Chambers, M. A. Carroll Sur. Drlg. sh.&L. 6,480 ft.

Big Creek—Fort Bend County

Barnett Pet. Corp. No. 2 J. H. P. Davis, B. Nickson Sur. T.D. 3,080 ft.; P.B. and sdtrkd.; T.D. 3,729 ft.; perf. csg. 3,697-3,705 ft.; perf. csg. 3,672-80 ft.; sanded up; reworking.

Boling—Fort Bend County

Mackhank Oil Co. No. 6-C E. C. Farmer, A. Scott Sur. Drlg. sh. 4,020 ft.

Orchard—Fort Bend County

Gulf Oil Corp. No. 53 Moore, J. Frazier Sur. Drlg. sh. 7,057 ft.
Gulf Oil Corp. No. 54 Moore, J. Frazier Sur. T.D. 626 ft.; W.O.C.

Thompson—Fort Bend County

Texas Co. No. 3 Sherman, S. Kennedy Sur. T.D. 5,380 ft.; 7-in. csg. 5,331 ft.; I.P. 75 B.P.D.

Dickinson—Galveston County

Atlantic O. & R. Co. No. 2 Lippman, W. G. Banks Sur. T.D. 8,169 ft.; perf. csg. 8,062-68 ft.; I.P. 11 B.P.H.; ¼-in. ck.
Bennet-Kenyon Oil Co. No. 1 Schroeder, W. G. Banks Sur. Drlg. sh. 7,030 ft.
Coast Pet. Co. No. 7 Stewart, W. K. Wilson Sur. T.D. 8,734 ft.; perf. csg. 8,698-8,710 ft.; tstg.
Humble O. & R. Co. No. 1 Leake, W. K. Wilson Sur. Drlg. sh. 3,370 ft.
Humble O. & R. Co. No. 20-A Stewart W. K. Wilson Sur. T.D. 8,950 ft.; 7-in csg. 8,897 ft.; I.P. 30 B.P.H.; ¼-in. ck.
Humble O. & R. Co. No. 1-C Stewart, W. K. Wilson Sur. Core sd. 8,580 ft.
Stanolind O. & G. Co. No. 3 Damiani, W. K. Wilson Sur. R.U.

High Island—Galveston County

Stanolind O. & G. Co. No. 62-A Cade, M. Fitzsimmons Sur. T.D. 5,800 ft.; P.B. and sdtrkd.; T.D. 4,945 ft.; P.B. 4,525 ft.
Stanolind O. & G. Co. No. 1 C. E. Smith-M. Dunman Sur. Drlg. sd.&L. 4,400 ft.

Silsbee—Hardin County

Humble O. & R. Co. No. 2 M. L. Kirby, Ellery Sur. T.D. 7,000 ft.; abd.
Republic Prod. Co.-Houston Oil Co. No. 17 Brooks, G. W. Brooks Sur. 10¾-in. csg. 1,714 ft.; T.D. 6,932 ft.; S.W. sd.; P.B. 5,400 ft.; sdtrkd. 5,577 ft.; T.D. 6,936 ft.; make D.S.T.
Republic Prod. Co. No. 18 G. W. Brooks, Brooks Sur. 10¾-in. csg. 1,548 ft.; T.D. 6,915 ft.; I.P. 350 B.P.D.; ¼-in. ck.; T.P. 850 lbs.; C.P. 600 lbs.
Republic Prod. Co.-Houston Oil Co. No. 19 Brooks, G. W. Brooks Sur. Spd.

Bammel—Harris County

Geo. Lawrence No. 2 Zapp, J. Farwell Sur. R.U.

Clinton—Harris County

Stanolind O. & G. Co. No. 1 Candelari O.W.D.D.; sdtrkd.; T.D. 8,140 ft.; comp.; for gas well 8,092-8,102 ft.
Stanolind O. & G. Co. No. 1 A. S. Moody, Reels & Trobough Sur. R.U.

Fairbanks—Harris County

Amerada-Stanolind O. & G. Co. No. 1 Wright, F. Fry Sur. T.D. 6,834 ft.; 7-in. csg. 6,833 ft.; W.O.C.

Friendswood—Harris County

Glenn McCarthy No. 1 Whitcomb, T. Choate Sur. Drlg. sh. 2,430 ft.

Goose Creek—Harris County

Bob Foster No. 1 Esenhour, Wm. Scott Sur. T.D. 2,741 ft.; no report.

Pierce Junction—Harris County

Gulf Oil Corp. No. 13-C Cain, J. Hamilton. T.D. 4,452 ft.; 7-in. csg. 4,440 ft.; I.P. 391 B.P.D.; ¼-in. ck.

South Houston—Harris County

Stanolind O. & G. Co. No. 2, Drlg. Dist. No. 7. R.U.
Stanolind O. & G. Co. No. 2. Dist. 20. 9⅝-in. csg. 1,449 ft.; T.D. 4,000 ft.; P.B. 3,930 ft.; I.P. 428 B.P.D.; ¼-in. ck.
Stanolind O. & G. Co. No. 8 First Natl. Bank, Callahan & Vance Sur. T.D. 4,854 ft.; make D.S.T.
Stanolind O. & G. Co. No. 2 H. G. Funk, Callahan and Vince Sur. R.U.

Tomball—Harris County

Humble O. & R. Co. No. 1 Burlington R. R. Unit 5. T.D. 5,577 ft.
Humble O. & R. Co. No. 7 Holderrieth, J. Pruitt Sur. T.D. 5,556 ft.; 5½-in. csg. 5,541 ft.; comp. for gas well.
Humble O. & R. Co. et al No. 16 Reid, Goodrick Sur. R.U.
Southwest Inv. Co. No. 3 Hillegiest, J House Sur. T.D. 5,606 ft.; run csg.; no report.
Texas Co. No. 4 Hillegiest, J. House Sur. T.D. 5,603 ft.; S.W. sd.; P.B.; sdtrkd.; drlg. sh.&sd. 5,153 ft.

Ganado—Jackson County

Texas Co. No. 1 C. E. Niebuhr, Morris & Cummings Sur. No. 4. Drlg. sd. and gravel 380 ft.

Amelia—Jefferson County

Humble O. & R. Co. No. 1 Charpect, C. Williams Sur. T.D. 6,778 ft.; swbg.
Humble O. & R. Co. No. 4 Peveto, C. Williams Sur. T.D. 6,782 ft.; I.P. 25 B.P.H.; ¼-in. ck.
Humble O. & R. Co. No. 6 R. J. Peveto, C. Williams Sur. Drlg. sh. 5,035 ft.
Humble O. & R. Co. No. 1-D Pinchback C. Williams Sur. T.D. 6,775 ft.; mudded hole; T.A.
Humble O. & R. Co. No. 1 W. D. Sunter, C. Williams Sur. Drlg. sh. 3,333 ft.
Humble O. & R. Co. No. 6 Tyrell-Combest, A. Savery Sur. Drlg. sh. 6,745 ft.
Humble O. & R. Co. No. 7 Tyrell-Combest, A. Savery Sur. T.D. 6,782 ft.; tstg.
Humble O. & R. Co. No. 14 Tyrell-Combest, A. Savery Sur. T.D. 6,800 ft.; abd.
Stanolind O. & G. Co. No. 4 McCormick, H. Williams Sur. T.D. 5,400 ft.; 7-in. csg. 5,384 ft.; I.P. 527 B.P.D.; ¼-in. ck.
Stanolind O. & G. Co. No. 5 McCormick, H. Williams Sur. 10¾-in. csg. 1,144 ft.; T.D. 5,380 ft.; run csg.
Stanolind O. & G. Co. No. 4 Sargi, H. Williams Sur. T.D. 6,106 ft.; P.B. 6,063 ft.; perf. csg. 6,101-05 ft.; comp.; for gas well.
Sun Oil Co. No. 1 Galley, Houston Sur. 16-in. csg. 107 ft.; drlg. sh. 6,400 ft.

Big Hill—Jefferson County

Stanolind O. & G. Co. No. 2-B Pipkin, Wm. McFadden Sur. Drlg. sh. 6,141 ft.
Stanolind O. & G. Co. No. 2 May Fitzhugh, Wm. McFadden Sur. Drlg. sd. &L. 3,354 ft.
Stanolind O. & G. Co. No. 4-A Pipkin, T.&N.O. Sur. Drlg. sd.&sh. 4,620 ft.

Fannett—Jefferson County

Gulf Oil Corp. No. 8 Junker, Wm. Smith Sur. 10¾-in. csg. 1,948 ft.; drlg. rk. salt 6,578 ft.

LaBelle—Jefferson County

Sun Oil Co. No. 1 John Ward, 933 ft. S of No. 2 Broussard, Wm. Burton Sur 18⅝-in. csg. 109 ft.; 9⅝-in. csg. 8,538 ft.; T.D. 9,951 ft.; 7-in. csg. 9,951 ft.; cd. gas sd. 10,043-46 ft.; bleeding off gas and pmpg. in mud.

Nome—Jefferson County

Sun Oil Co. No. 3 Burrows, J. Blair Sur T.D. 6,045 ft.; I.P. 290 B.P.D.; ¼-in. ck.
Sun Oil Co. No. 4 Burrows, J. Blair Sur. T.D. 5,662 ft.; abd.
Sun Oil Co. No. 6 Long, J. Blair Sur. 13⅜-in. csg. 108 ft.; W.O.C.

North Cheek—Jefferson County

Magnolia Pet. Co. No. 2 Phelan, S. Stevens Sur. 18-in. csg. 63 ft.; 10¾-in. csg. 2,916 ft.

Cleveland—Liberty County

Gulf Oil Corp. No. 19-C Kirby, J. Pleasants Sur. Drlg. sh. 4,500 ft.

Hankamer—Liberty County

Gulf Oil Co. No. 25 E. W. Boyt, Amos Allen Sur. Drlg. sh. 5,290 ft.

Hardin—Liberty County

Jack Frazier No. 1 Roberts, H. B. Johnston Sur. T.D. 7,607 ft.; 5½-in. csg. on bttm.; perf. csg. 7,581-67 ft.; flwd. 49 bbls. dist. in 20 hrs.; 12/64-in. bottom-hole ck.
Shell Pet. Corp. No. 1 Cessna, H. B. Johnson Sur. R.U.
L. W. Wickes No. 1 Lynott Buffman, J. Robinson Sur. R.U.
Woodley Pet. Co. No. 1 McMurtay, H. B. Johnston Sur. 10-in. csg. 1,164 ft.; T.D. 7,626 ft.; 7-in. csg. 7,575 ft.

Hull—Liberty County

Bishop Oil Co. No. 1 C. R. Wilson, J. Devore Sur. Oil sd. 780-88 ft.; T.D. 4,127 ft.; 7-in. csg. 2,204 ft.; perf. csg. 2,286-90 ft.; P.B. and strkd.; S.D. 2,276 ft.
Gulf Oil Corp. No. 24 Baldwin, J. Devore Sur. T.D. 5,060 ft.; comp. for gas well.
Hamill & Smith No. 3 Barrow, J. Devore Sur. T.D. 4,630 ft.; P.B. 3,900 ft. to sdtrk.
Houston Prod. Co. No. 2 Hannah, J. Devore Sur. Drlg. sh.&L. 4,637 ft.
Texas Co. No. 8 Hannah fee, J. Devore Sur. 10¾-in. csg. 554 ft.; W.O.C.

Bay City—Matagorda County

Hamman Expl. Co. No. 2 J. C. Crook, E. Hall Sur. Drlg. sh. 6,212 ft.

Buckeye—Matagorda County

United North & South Development Co. No. 1 G.B.M. Cotton League. 13⅜-in. csg. 1,530 ft.; drlg. sh. 7,997 ft.

Hawkinsville—Matagorda County

Sun Oil Co. No. 2 Craig, T. Williams Sur. Top salt 796 ft.; base salt 2,099 ft.; 18⅝-in. csg. 2,174 ft.; 13⅜-in. csg. 3,700 ft.; 9⅝-in. csg. 5,689 ft.; T.D. 5,969 ft.; hole cleaned; P. B. and sdtrkd.; making up 3-in. drill pipe; 7-in. csg. 6,044 ft.; T.D. 6,706 ft.; rmg.

Markham—Matagorda County

Hamil & Hamil No. 3 Hudson, H. Parker Sur. T.D. 3,750 ft.; P.B. 3,700 ft.; sdtrkd.; T.D. 3,637 ft.; 7-in. csg. 3,635 ft.; no report.
Turman Oil Co. et al No. 3 Hudson, H. Parker Sur. R.U.

Palacios—Matagorda County

Glenn McCarthy No. 2 Foley, L. Goodwin Sur. 10¾-in. csg. 2,520 ft.; core 7,742 ft.
Glenn McCarthy No. 1 W. M. Rohls, sec. 10, L. Goodwin Sur. Core sd.&sdy. sh. 7,842-59 ft.; make D.S.T.
Glenn McCarthy No. 1 Palacios State Bank, L. Goodwin Sur. 10¾-in. csg. 2,525 ft.; drlg. sh. 7,337 ft.
Sun Oil Co. No. 1 Bay Shore Farms, Lewis Goodwin Sur. 13⅜-in. csg. 1,910 ft.; T.D. 8,700 ft.; rmg.

Van Vleck—Matagorda County

Skelly Oil Co. No. 2 Johnson, M. Cummins Sur. T.D. 8,465 ft.; 7-in. csg. 8,464 ft.; perf. csg. 8,212-16 ft.; I.P. 353 B.P. D.; ¼-in. ck.

Orange—Orange County

Texas Co. No. 12 Kuhn, T. J. Nolgrass Sur. T.D. 1,726 ft.; run 13⅜-in. csg.

Segno—Polk County

Gulf Oil Corp. No. 1 Wing, I.&G.N. Sur. No. 15. Drlg. sd. 5,210 ft.
Gulf Oil Corp. No. 7 Wing, I.&G.N. Sur No. 15. Drlg. sd. 5,184 ft.
Humble O. & R. Co. No. 6-B Kirby Lbr. Co., M. Victor Sur. 13-min. D.S.T. 5,346-66 ft.; recvd. S.W.; core ahead.

Quintana-O'Connor-Greta—Refugio County

United Gas Corp. No. 12 J. J. O'Brien. T.D. 9,225 ft.; perf. liner 8,103-8,128 ft.; tstg. S.W.; P.B. 7,800 ft.; tstd. S.W.; abd.

Spurger—Tyler County

Republic-Houston Oil Co. No. 4 Hurd, N. Hurd Sur. Core sdy. sh. 6,730 ft.

Tellener—Victoria County

Magnolia Pet. Co. No. 1 Beck, T.&N.O. Sur. T.D. 4,777 ft.; abd.

Keeran—Victoria County

Union Oil Co. No. 5 Keeran, M. DeLeon Sur. T.D. 6,027 ft.; 7-in. csg. 6,027 ft.; tstd. oil and S.W. through perf. csg. 5,761-5,972 ft.; made squeeze job; W. O.C.; reperf. csg. 5,612-17 ft.; tstd. S.W.; made squeeze job; W.O.C.

McFadden—Victoria County

Transwestern Oil Co. No. 4, McFaddin Sur. Drlg. sh.&L. 2,330 ft.

Placedo—Victoria County

Barnsdall Oil Co.-American Liberty Oil Co. No. 12 Pickering. Drlg. sh.&L. 4,200 ft.
Barnsdall-American Liberty Oil Co. No. 21 Pickering & Roos, S.A.&M.G. Sur. Spd.
Barnsdall Oil Co. et al No. 22 Pickering & Roos, S.A.&M.G. Sur. R.U.
T. N. Development Co. No. 1 Henderson, S.A.&M.G. Sur. T.D. 4,777 ft.; 5-in. csg. 4,766 ft.
Magnolia Pet. Co. No. 10 Sklar, S.A.&M. G. Sur. T.D. 4,770 ft.; 7-in. csg. 4,760 ft. R.U. to pump.
H. B. Ownby No. 5 Traylor, S.A.&M.G. Sur. T.D. 4,769 ft.; 5½-in. csg. 4,754 ft.; I.P. 1 B.P.H.; ⅛-in. ck.

Clay Creek—Washington County

Sun Oil Co. No. 7 Droeger, J. F. Perry Sur. R.U.

Five Corners—Wharton County

Texas Co. No. 8-B Pierce, J. Hyland Sur. Drlg. sh.&L. 4,266 ft.

Magnet—Wharton County

Atlantic Ref. Co. No. 2-B H. C. Cockburn, Smith & McKenzie Sur. T.D. 5,550½ ft.; 7-in. csg. 5,542 ft.; swbg.
Atlantic Ref. Co. No. 3-B Cockburn, Smith & McKenzie Sur. R.U.
Humble O. & R. Co. No. 1 Cockburn, S. Castleman Sur. 10¾-in. csg.; 1,236 ft.; T.D. 5,550 ft.; 7-in. csg. 5,540 ft.; swbg.

Pickett Ridge—Wharton County

Texas Co. No. 33-A Pierce Est., G.B.&N. Sur. No. 4; 9,000-ft. test. T.D. 8,408 ft.; rmg.

Withers—Wharton County

Texas Co. No. 31-C Pierce, Wm. Pettus Sur. T.D. 5,557 ft.; 7-in. csg. 5,552 ft. pulling tbg.
Texas Co. No. 35-C Pierce, Wm. Pettus Sur. T.D. 5,551 ft.; 7-in. csg. 5,546 ft.; W.O.C.
Texas Co. No. 36-C Pierce Est., Wm. Pettus Sur. R.U.
Texas Co. No. 37-C Pierce, Wm. Pettus Sur. Drlg. sh.&L. 1,889 ft.

GULF COAST WILDCATS

Brazoria County

Humble O. & R. Co. No. 1 W. B. Munson, S. Carter Sur. R.U.
Ohio Oil Co. No. 1 Kempner Adams, H. T.&B. Sur. No. 33. Drlg. sh. 2,995 ft.
Pure Oil Co. No. 1 P. M. Slade, S. F. Austin Lge. T.D. 8,353 ft.; W.O.C.
Texas Gulf Prod. Co. No. 1 W. D. Adams, H.T.&B. Sur. No. 40. Drk.
Texas Co. No. 2 Robbins, James W. Brougham Sur. 13⅜-in. csg. 5,498 ft.; 9⅝-in. csg. 6,060 ft.; T.D. 7,465 ft.; rmg.; P.B. to 6,250 ft.; sdtrkd. at 6,583 ft.; rmg.

Chambers County

George H. Anderson et al, J. Janis Sur. 10¾-in. csg. 1,083 ft.; drlg. sh. 2,449 ft.
David B. MacDaniels No. 1 S. E. Barrow, Luke Bryan Sur. 10¾-in. csg. 1,023 ft.; drlg. sh. 5,300 ft.

Fort Bend County

Research, Inc., No. 1 Moore, S. Kennedy Sur. Drlg. rk. 5,015 ft.

Harris County

Superior Oil Co. No. 1 Butler, Eehrhardt Sur. T.D. 9,898 ft.; 7-in. csg. on bttm.; gas sd.; will core deeper.
West Prod. Co. No. 1 Ammon Underwood, Nicklos Clopper Sur. Drlg. sh. 2,230 ft.; no report.

Jackson County

George W. Greet et al No. 1 J. R. Davis, David Hoffman Sur. T.D. 6,991 ft.; cutting stuck D.S.

Matagorda County

Continental Oil Co. No. 2 Hawkins Est., D. McCarty Sur. 20-in. csg. 120 ft.; 11¾-in. csg. 5,409 ft.; T.D. 6,612 ft.; heaving sh.; P.B. to 5,365 ft.; sdtrkd.; drlg. 5,636 ft.
Royal O. & G. Corp. No. 1 T. J. Ewing, Burnett and Sojourner Sur. Drlg. sh., 8,790 ft.

Montgomery County

J. G. Mayo et al No. 1 Gibbs Bros. Lbr. Co., J. D. Martinez Sur. Drlg. clay 810 ft.

Newton County

Houston Oil Co.-Republic Prod. Co. No. 1 Sabine Tram Co., H.&T.C. Sur., sec. 35. Drlg. sh. 5,919 ft.

Polk County

H. E. Williams & Thompson No. 1 Carter, H. Augustine Sur. Drlg. L. 2,727 ft.

Tyler County

McArthur & Nixon No. 1 Kountze, J. A. Hankins Sur. S.D. 3,845 ft.

Washington County

K. D. Harrison and C. E. Starr No. 1 Charles and Wm. Ellerman, Wm. Bridges Lge. 13-in. csg. 290 ft.

S. W. TEXAS WILDCATS

Aransas County

Barnsdall Oil Co. No. 2 Kate Edwards, 440 ft. S line, Lot 85, 660 ft. SW No. Wm. Lewis Sur. Drlg. sdy. sh. 9,418 ft.
Danray Oil Co. No. 1 Davis, Tr. 5, Wm. Boyd Sur. Drlg. 8,855 ft.

Atascosa County

L. G. Priest No. 1 Bridwell, Tr. 45, Gorman Sur. S.D. 2,145 ft.

Bastrop County

Marts & Beavens No. 1 Gilliam, Thos. Garretson Sur. M.I.R.
McNeill Pet. Co. No. 1 Litton, 71-ac. tr., Cedar Cr. Community. Drk.
N. Texas Oil Co. No. 1 Barton, J. Rogers Sur. Drlg. 557 ft.
Sherman Nelson No. 1 Litton, Litton Sur. Spd.

Bexar County

Edna May Oil Co. No. 1 Cassin, F. Rodriguez Sur. T.D. 1,349 ft.; swbg. oil.

Blanco County

C. L. Nixon No. 1 Hornberger, 1,200 ft. S line, 300 ft. E line, Sur. 723. S.D. 1,252 ft.; T.A.
H. T. Roe No. 4 Morrisey, Webb Sur. 91. Drlg. 272 ft.

Brooks County

Mills Bennett Prod. Co. No. 1 Jones, 466 ft. N and E lines, Blk. 34, Sanchez Sur., La Rucia Gr. Set surf. csg. 1,041 ft.; W.O.C.
Standard of Tex. No. 1 Mestina, Mestina Lse. No. 3. T.D. 6,786 ft.; squeeze job 2,495 ft.; W.O.C.

Caldwell County

Baker et al No. 1 Florine, R. Davidson Sur. D.&A. 3,545 ft.
F. & W. Drlg. Co. No. 1 Rodenberg, J Berry Sur. T.D. 2,115 ft.; comp.; 10 B.P.D.; pmpg.
Four Link Oil Co. No. 1 Magee, J. Genge Sur. Drlg. sh. 760 ft.
E. H. Grazer No. 1 Field, Dikes Sur. T.D. 1,965 ft.; swbg., oil.
J. O. Mack, Jr., No. 1 Withers, Wm. House Sur. Drlg. 1,698 ft.
G. C. Richardson No. 1 Trammel, E. Berry Sur. Drlg. 2,059 ft.
Lee Ross No. 1 Daugherty, John Tyler Sur. Drlg. 556 ft.
Sherman Nelson No. 1 Etheridge, T. Hunter Sur. T.D. 2,180 ft.; R.U.; W.O.O.
Siznod Oil Co. No. 1 Reed, M. G. Dykes Sur. D.&A. 2,562 ft.

Cameron County

Ruez-Morton No. 1 United Land Irr. Co., Lot 7, Blk. 402, El Jardin Subd. Drlg. 6,561 ft.

Comal County

J. R. Yates No. 1 Heidrich, Heidrich ranch. R.U.

Dimmitt County

H. F. Wilcox No. 2 Light ranch, 330 ft. S and W lines, sec. 29, I.&G.N.R.R. Sur., Blk. A. Set sur. csg.; S.D.
H. F. Wilcox No. 3 Light ranch, 330 ft. N and W lines, sec. 113, I.&G.N.R.R. Sur., Blk. A. Drk.
Reynosa Oil Co. No. 1 Peters, 330 ft. N and W lines, SE¼, Sur. 37, Cg. 1,811 ft.
Texas Canadian Oil Co. and Nelson No. 1 Luby Est., 330 ft. N line, 660 ft. W line, Blk. 10, Nelson Subd. R.U.

Duval County

Baltimore Drlg. Co. No. 1 Afflerbach, Sur. 342. No report.
Hougen, Tr., No. 1 Patton, Sur. 148. S.D. 2,200 ft.
King Drlg. Co. No. 1 Parr, San Andres Gr. (Cor.); set csg. 5,950 ft.; D.&A.; T.D. 6,526 ft.
Liberty Oil Co. No. 1 State, Sur. 216. T.D. 1,555 ft.; S.D.
Standard Oil Co. of Texas No. 3 Gray Est.,

330 ft. N and E line, sec. 170, M. E. Gussett Sur. Drlg. 2,029 ft.
Woodley Pet. Co. No. 1 Parr, 100-ac. tr., San Andres Gr. Drlg. 3,913 ft.

Frio County

Amerada Pet. Corp. No. 1 Harrigan, Flores Sur. 306. Lost hole; T.D. 6,410 ft.; P.B. 5,720 ft.; tstg.
Pagenkoff & Jamieson No. 2 Blackaller, Gourley Sur. 765. T.D. 3,270 ft.; D.&A.

Goliad County

Goliad Oil Co. No. 2 Cole, lot 33, Goliad Town. Tr. Sur. Set protective csg. 4,500 ft.; cg. sh. 5,643 ft.

Guadalupe County

R. T. Belcher No. 1 Fulshear, R. Smith Sur. Drlg. 2,206 ft.
Eddy et al No. 1 Smith, Hunter Sur. Drlg. sh. 39 ft.
Farr et al No. 1 Hemple, Williams Sur. T.D. 2,076 ft.; S.D.; oil and wtr. in hole.
Lincoln Pet. Co. No. 1 Baenzinger, Manzola Sur. Set csg. 1,990 ft.; drlg. plugs
Mason Altgelt No. 1 Schubert, Esnaurizer Sur. Drlg. 557 ft.
Robertson et al No. 1 Blumberg, M. Baker Sur. Drlg. 1,026 ft.

Hidalgo County

Ivan Howard No. 1 Moczygemba, Erasmo Seguin 5, League Gr. Drk.
Sulgrade Oil Co. No. 1 Mayer & Weill, Porc. 47. R.U.
Y. & B. Oil Co. No. 1 Waite, Tr. 382, Los Jidos Gr. Set surf. csg.; W.O.C.

Jim Hogg County

French Oil Corp. No. 1 Vela, Sur. 573. R.U.

Jim Wells County

Magnolia Pet. Co. No. 7 Seeligson, 10,435 ac. tr., Los Jaboncillos Gr. D.S.T. 6,410-27 ft.; rec. 40 ft. dist.; 1,000 lbs. W.P.; 4½ min.; cg. g. sd. 6,497 ft.

Karnes County

Dinero O. & G. Co. No. 1 Kohler, 58.7-ac. tr., V. Blanco Sur. R.U.
Pettus O. & R. Co. No. 1 McKinney, R. Ballard Sur. D.S.T. 3,647-53 ft.; rec. 450 ft. P.L.O.; comp.; 368 B.P.D.; P.L.O. on ¼-in. ck.; T.D. 3,653 ft.

Kendall County

Landon & Peffley No. 1 Seidensticker, Sur. 257, Chorcon Gr. Drlg. L. 153 ft.

Kleberg County

Hinds Drlg. Co. No. 1 Murchison, Lot 6, Blk. 22, K.T.&I. Subd. S.D.; repairs 4,880 ft.

Lee County

Jas. E. Pederson No. 1 Turner, David Hudson Sur. W.O.; no report.

Live Oak County

Chas. Hanna et al No. 1 Wedding, 200-ac. tr., Haughy Sur. R.U.
Henshaw Bros. & Nelson No. 1 Ulesch, Triplett Sur. No. 150. D.&A. 3,218 ft.
Loma Oil Co. No. 1 San Antonio Joint Stock Land Bank, 800-ac. tr., J. Turner Sur. D.&A. 1,510 ft.
W. C. McBride No. 1 Sanger, Sur. 391. Drlg. 2,957 ft.
Ranco Oil Corp. No. 1 fee, 660 ft. NW and SW lines, Pointevent Sur. 3. R.U.

McMullen County

Edwards, Zock et al No. 1 Two Rivers Ranch Co., 150 ft. S and W lines, SE¼ sec. 60. Sd. 1,100-02 ft.; S.O.&G.; T.D. 1,778 ft.; M.I.R.
Harrison & Danvers No. 3 Claunch, M. Hely Sur. Drlg. sh. 211 ft.
Howell Oil Corp. No. 1 Martin, Sur. 213. S.D. 3,510 ft.
W. L. Hinds No. 1 Rhodes, NE¼, NW¼ sec. 54. Cg. 1,997 ft.
Rowan & Nichols No. 1 Rhodes, NE¼ sec. 18, Seale & Morris Sur. Drlg. 1,811 ft.
Schimmel et al No. 1 Hagist, Sur. 467 Cor.; W.O.C. 46 ft.
C. C. Shumway No. 10 Shiner ranch, sec. 51, Shumway Subd. Sd. 1,572-83 ft.; D.&A.

Maverick County

Rio Dev. Co. No. 4 State Bank & Trust Co., Sur. 2. Drlg. sh. 189 ft.
Wellington Oil Co. No. 1 Chittam, 330 ft. N line, 2,310 ft. W line, sec. 129, Blk. 7. M.I.R.

Milam County

Kingdor Expl. Co. No. 1 White, B. Wickson Sur. Drlg. L. 5,075 ft.

Nueces County

Gillock et al No. 2 Poenisch, Lot 11, sec. 32. Cg. 4,312 ft.
W. L. Hinds Drlg. & Expl. Co. No. 1 River Bros. 80-ac. tr., sec. 301. T.D. 6,015 ft.; R.U.
Seaboard Oil Corp. No. 1-C Chapman sec. 111, Laurels Farm Lots. T.D. 7,010 ft.; rng. el sur.
Seaboard Oil Corp. No. 1 Jurica, Blk. 32, Robertson Farm Trs. Drlg. 6,527 ft.
Sam E. Wilson No. 1 Herold, Lot 2, sec. 6, Bohemian Colony Subd., Enrique Villareal Sur. Drlg. 1,568 ft.

San Patricio County

Danray Oil Co. No. 1 Davis, Tr. 5, Wm Boyd Sur. T.D. 4,606 ft.; set csg.; plg. tbg. to retest.
Eleanor Oil Co. No. 1 Green Est., 167.4 ac. tr., Williamson Sur.; (W.O.). Old T D. 6,800 ft.; set 5-in. csg. 7,000 ft.; perf. 6,566-74 ft.; swbg.
Humble O. & R. Co. No. 1 McCampbell 610.62-ac. tr., Martinez Sur. D.&A. 7,215 ft.
Plymouth Oil Co. No. 1-A Odem, subd. 2, A. Herron Sur. Drlg. sdtrkd. hole 5,076 ft.
Wellington Oil Co. No. 1-B Welder, SE¼ sec. 6, Cubage & Miller Subd., Garza Sur. Drlg. 6,123 ft.

Starr County

Calderoni-James-Follette No. 1 Rodriguez, Blk. 6, Sh. 56, Porc. 80. Set sur. csg 100 ft.; drlg. 719 ft.
Donroy Oil Co. No. 2 Ramos, Sur. 149. Drlg. 1,595 ft.
Donroy Oil Co. No. 1 Ramon, 2,400 ft SE line, 150 ft. SW line, sec. 150. Cg. 1,281 ft.
Gilcrease Oil Co. No. 2 Castillo, Blk. 11, Walker Subd., Porc. 77. D.&A. 1,712 ft.
E. J. Pearl No. 1 de la Garza, Sur. 262. R.U.
Transwestern Oil Co. and Davenport No. 3 Slick, sec. 527. Drlg. 2,697 ft.

Webb County

R. S. Bolling No. 1 Fort Worth Natl. Bank, Sur. 466. M.I.M.
Eugene Garner No. 2 Saldivar, Blk. 12, Sur. 567. Oil sd. 997-1,000 ft.; perf. 990-98 ft.; T.D. 1,000 ft.; D.&A.
Eugene Garner No. 3 Saldivar, 150 ft. S and E lines, Blk. 12, Sur. 657. Drlg. 327 ft.
Simon, Grossman & Katz No. 1 Saldivar, 600 ft. W line, 760 ft. N line, Blk. 11, Garner Subd., Murrell Ranch Sur. 657. Drlg. 370 ft.
J. W. Magee No. 1 Garcia, Blk. 21, James Subd. Drlg. 912 ft.
Paul Meaders No. 1 Garcia, Sur. 338. Loc.
J. R. B. Moore No. 1 Slator, Blk. 7½ Slator Subd., Borrego Gr. Drlg. 857 ft.

Willacy County

Ruez-Morton, Inc., No. 1 F. Armendiaz, C Lot 9, Sh. 4, San Juan de Carricitos Gr. Drlg. 537 ft.
Ruez-Morton, Inc., No. 1 Johnson-Stillman, Lot 14, Blk. 25, Sh. 44, San Juan de Carricitos Gr. S.D. 643 ft.

Wilson County

Eckert & Sons No. 1 Rossi, Salina Sur. D.&A. 1,252 ft.
Maryland Oil Co. No. 1 Rice, 93-ac. tr., Mays Sur. A-204. O.W.W.O.; old T.D. 5,611 ft.; D.&A.
R. C. Stanley No. 2 Heirholzer, R. Salina Sur. Oil sd. 1,025-30 ft.; rng. tbg. to comp.

Zapata County

Allison & Abrams No. 1 Vela, Sur. 249. Drlg. 1,047 ft.
O. W. Killam No. 1 Bruni, Blk. 83, Ranchito Pasture, Borrego Gr. Sd. 1,490-1,510 ft.; S.O.; drlg. 3,465 ft.
Ray L. Martin No. 1 Vela, Blk. 44, Sh. 2, El Grullo Gr. Drlg. 1,317 ft.

S. W. TEXAS PROVEN

McCampbell—Aransas-San Patricio Counties

Atlantic Ref. Co. No. 1-A Guarantee, Blk. 13, Lot 16. T.D. 7,163 ft.; perf. 7,102½-05½ ft.; completing.
Atlantic Ref. Co. No. 1-B Guarantee, Blk. 13. Drlg. 5,211 ft.
Atlantic Ref. Co. No. 3-C McCampbell, Blk. 40. O.W.W.O.; old T.D. 6,551½ ft.; T.D. 7,171 ft.; set 5-in. csg.; W.O.C.
Atlantic Ref. Co. No. 5-C McCampbell, Lot 12, Blk. 39. Plts.
Atlantic Ref. Co. No. 6-C McCampbell, Lot 3, Blk. 42. Drlg. 1,416 ft.
Atlantic Ref. Co. No. 1-D McCampbell, Lot 16, Blk. 39. T.D. 7,120 ft.; P.B. and set csg. 6,612 ft. (cor.); perf. 6,544-47 ft.; recmtd. to reperf.
Atlantic Ref. Co. No. 1-E McCampbell, Lots 1 and 2, Blk. 38. Set 7-in. csg. 7,136 ft.; W.O.C.
Atlantic Ref. Co. No. 2-A Murray. Set csg. 1,400 ft.; W.O.C.
Atlantic Ref. Co. No. 2-B Murray, Lot 13, Blk. 12. Spd.
Atlantic Ref. Co. No. 1 Scrivener, Lots 11 and 12, Blk. 11. Set 7-in. csg. 7,119 ft.; W.O.C.
Atlantic Ref. Co. No. 2 Scrivener, Lot 9, Blk. 11. Spd.
Buckingham Oil Co. No. 12-A McCampbell, Blk. 42. Drlg. 4,046 ft.
Buckingham Oil Co. No 4-B McCampbell, Lot 16, Blk. 40. Sd. 7,332-48 ft.; O.&G.; S.D.
Buckingham Oil Co. No. 14-A McCampbell, Blk. 42. Drlg. 2,016 ft.
Buckingham Oil Co. No. 1-C McCampbell, 33.8-ac. tr., Blk. 27. Cg. 7,142 ft.
Danrey Oil Co. No. 1 Hay Est., Lot 13, Blk. 8. Drlg. 5,026 ft.
Graham & Buckingham Oil Co. No. 1-D Porterfield, Lot 11, Blk. 9. M.I.M.
Landreth Prod. Co. No. 4-A McCampbell, Lots 1 and 2, Blk. 39. Sd. 7,114-22 ft.; set csg. 7,125 ft.
Peach Tree Oil Co. No. 1 Porterfield, Lot 16, Blk. 10. Drlg. 5,193 ft.
Rutherford Oil Corp. No. 1 Conn-Brown, Lot 14, Blk. 10. R.U.
Shasta Oil Co. No. 1 Vaughn, Lot 13, Blk. 10. Set csg. 7,112 ft.; comp.; 386 B.P.D. on ⅞-in. ck.; perf. 7,114-19 ft.

North Dale—Bastrop County

Shobe-Feldot Oil Co. No. 2 Duran, Flint Sur. Comp.; 10 B.P.D.; T.D. 2,341 ft.

Plummer—Bee County

Ann Oil Co. No. 2-B Smith, J. R. Johnson Sur. T.D. 3,066 ft.; set csg. 3,054 ft.; perf. 3,032-35 ft.; comp.; 30 B.P.D.; ½-in. ck.
W. C. McBride No. 1 Schneider, 200 ft. SW line, 300 ft. SE line, Sur. 2, Sd. 3,060-68 ft.; set csg. 3,068 ft.; W.O.C.

West Tuleta—Bee County

Salt Dome Oil Co. No. 2 Tuleta Merchantile Co., SW¼, sec. 10. Set csg. 3,623 ft.; comp.; 6 B.P.D.; jetting through 2-in. tbg.

Von Ormy—Bexar County

Virginia Oil Co. No. 3 Bitter, Barrera Sur. 58. Comp.; 3 B.P.D.; T.D. 621 ft.

Alta Mesa—Brooks County

Standard of Texas No. 5 Mestina, Lease No. 1. 7-in. csg. set 3,220 ft.; T.D. 5,505 ft.; P.B. 4,997 ft.
Standard Oil Co. of Texas No. 3 Garcia, Lse. 3. S.D. wtr.; T.D. 1,684 ft.
Standard Oil Co. of Texas No. 8 Mestina, Lse. No. 1. S.D.; wtr. 1,699 ft.

Alta Verde—Brooks County

Bishop & Woods No. 1 Maupin, Sur. 311. Set csg. 50 ft.; cg. 932 ft.
Dick Young No. 5 Singer, Blk. 12, Sur. 312 (W.O.). T.D. 1,442 ft.; bailing.

Branyon—Caldwell County

Fred J. Adams No. 4-B Ellison, Cooper Sur. Comp.; 270 B.P.D.; T.D. 2,255 ft.
Fred J. Adams No. 5-B Ellison, Cooper Sur. R.U.
Artz & Horner No. 1 Brown, Miller Sur. O.W.W.O.; comp.; 40 B.P.D.; T.D. 2,220 ft.
Baker-Freeman No. 2 Corder, Neill Sur. Comp.; 250 B.P.D.; T.D. 2,130 ft.
Chiquita Oil Co. No. 6 Robertson, Neill Sur. T.D. 2,198 ft.; comp.; 15 B.P.D.; pmp.; P.B. 2,148 ft.
L. M. Kniffin No. 1 Clark, Miller Sur. Comp.; 20 B.P.D.; T.D. 2,157 ft.
Lincoln Pet. Co. No. 6 Callihan, Cooper Sur. Comp.; 25 B.P.D.; T.D. 2,150 ft.
Sherman Nelson No. 2 Clark, Neill Sur. Completing; T.D. 2,140 ft.
Taylor Ref. Co. No. 2-C Branyon, Cooper Sur. Comp.; 70 B.P.D.; T.D. 2,328 ft.
W. M. Vaughy No. 6 Flowers, J. A. Neill Sur. Set csg. 1,869 ft.; comp.; 25 B.P.D.; pmp.; T.D. 2,145 ft.
Whisenant & Trenchard No. 2-A Magee, Neill Sur. R.U.
R. S. Wyrick No. 3 Magee. Set csg. 2,060 ft.; W.O.C.

Luling—Caldwell County

Rio Bravo Oil Co. No. 15 Merriweather, J. Henry Sur. Comp.; 100 B.P.D.; T.D. 2,107 ft.

Salt Flat—Caldwell County

Chiquita Oil Co. No. 5 Hickman, G. Hinds Sur. Set csg. 2,639 ft.; W.O.C.
Pagenkopf & Jamieson No. 2 Hanson, Hinds Sur. Completing Edw. L. 2,652-53 ft.

Charamousca—Duval County

N. V. Duncan No. 12 Worden-Draught, Sur. 151. D.&A. 1,670 ft.
N. V. Duncan No. 13 Worden-Draught, Sur. 151. Drlg. 936 ft.

Colmena—Duval County

Colmena Oil Co. No. 7 D.C.R.C., Sentz Sur., Blk. 12, sec. 51. Sd. 1,499-1,502 ft.; set csg.; comp. 52 B.P.D.; jetting.
Conservative Oil Co. No. 1 D.C.R.C., S½, Sur. 47. Set csg. 1,483 ft.; T.D. 1,487 ft.; jetting oil.
Humble O. & R. Co. No. 8-D D.C.R.C., Sur. 585. Set csg. 1,438 ft.; W.O.P.E.
Magnolia Pet. Co. No. 1-B Gideon, Dykes Sur. Comp.; 27 B.P.D.; T.D. 2,188 ft.

Driscoll—Duval County

Continental Oil Co. No. 16-A, Sur. 448. Sd. 3,439-43 ft.; tstd. gas, oil and S.W.; Drlg. 3,557 ft.

Government Wells—Duval County

Central Prod., Inc., No. 4-A Wendt. Drlg. plugs in sd. 2,285-2,307 ft.
Cox & Hamon No. 9 Green, Sur. 118. Drlg. 117 ft.
Magnolia Pet. Co. No. 42 Hahl, sec. 41. Sd. 2,279-97 ft.; comp.; 25,000,000 ft. gas; T.D. 2,452 ft.

Hoffman—Duval County

Cox & Hamon No. 3 Green, Sur. 118. Comp.; 50 B.P.D.; T.D. 2,735 ft.
Duval Oil Corp. No. 3-A Hoffman, Sur. 118. Comp.; 80 B.P.D.; T.D. 2,746 ft.
Duval Oil Corp. No. 10-A Hoffman, Sur. 118. Cg. 2,065 ft.

Labbe—Duval County

Humble O. & R. Co. No. 6 Roos, sec. 119. Set csg. 2,820 ft.; comp.; 8 B.P.H.; sd. 2,812-30 ft.
Humble O. & R. Co. No. 9 Roos, sec. 119. Drlg. 1,147 ft.
Magnolia Pet. Co. No. 7 Labbe, Sur. 1. Sd. 2,850-54 ft.; comp.; 50 B.P.D.

Lundell—Duval County

Govt. Wells Oil Co. No. 3 Lundell, Sur. 140. D.&A. 2,231 ft.
Govt. Wells Oil Co. No. 4 Lundell, Sur. 140. Drlg. 558 ft.

North Sweden—Duval County

Argo Oil Co. No. 4 Carrillo, NE¼, sec. 9. Cg. 4,757 ft.
Argo Oil Co. No. 5 Carrillo, Blk. 9, Sweden Farm Lots. Drlg. 1,050 ft.
Arkansas Fuel Oil Co. No. 3 Rossi, 100-ac. tr., Blk. 10. Drk.
Benedum & Trees Oil Co. No. 1 Parr, 75-ac. tr., San Andres Gr. Drlg. 3,921 ft.
Benedum & Trees Oil Co. No. 4 Puig, 330 ft. W line, 910 ft. S of No. 2 San Andres Gr. Sd. 4,768-97 ft.; rng. el. sur.
Bridwell Oil Co. No. 1 Ancino, 152-ac. tr., Blk. 19. Drlg. 4,596 ft.
Bridwell Oil Co. No. 1 Garcia, 148.6-ac. tr., S. Flores Gr. Drlg. 2,167 ft.
Frank Gravis Oil Co. No. 1 Puig, sec. 24, Andres Gr. 1.D. 4,852 ft.; sd. 4,790-98 ft.; comp.; 265 B.P.D.; ⅞-in. ck.
Frank Gravis No. 2 Puig, sec. 24, San Andres Gr. Drlg. below surf. csg.
Gravis & Doran No. 4 Puig, San Andres Gr. Sd. 4,739-50 ft.; W.O.C.
Navarro O. Co. No. 1 Rossi, Blk. 11, sec. 35. Sd. 5,330-42 ft.; flwd. oil; went dead; to pmp.; T.D. 6,179 ft.; R.U. to pmp.
Parr Oil Co. No. 7 Puig, 150-ac. tr., San Andres Gr. Drlg. 4,736 ft.
Russ Pet. Co. No. 3 Farias, Sur. 9. Sd. 4,805-10 ft.; rng. tbg.
Standard Oil Co. of Kansas No. 2 Parr, 80-ac. tr., San Andres Gr. T.D. 4,749 ft.; sd. 4,735-49 ft.; comp.; 254 B.P.D. on ⅞-in. ck.
Standard Oil Co. of Kansas No. 3 Parr, 1,650 ft. N line, 330 ft. W line, San Andres Gr. Drlg. 3,525 ft.
Standard Oil Co. of Kansas No. 2 Rossi, Blk. 10, Sweden Farm Lots. Comp.; 214 B.P.D. on ⅞-in. ck.
Standard Oil Co. of Kansas No. 3 Rossi, sec. 10, Sweden Farm Lots. Spd.
Standard Oil Co. of Kansas No. 1 Walstad, Lot 9, Sweden Subd. T.D. 4,790 ft.; set csg.; comp.; 115 B.P.D. on ⅞-in. ck.; sd. 4,761-85 ft.
Standard Oil Co. of Kansas No. 2 Walstad, Lot 9, Sweden Farm Lots. Drlg. 2,620 ft.

Palangana—Duval County

Penn Palangana Oil Co. No. 1 C. K. Gravis Sur. 250. Cg. 5,621 ft.

Piedra Lumbre—Duval County

Magnolia Pet. Co. No. 20 D.C.R.C., Sur. 100. Sd. 1,986-97 ft.; rng. tbg.

Sarnosa—Duval County

Sarnosa Oil Corp. No. 16 Well, 300-ac. tr., Sur. 130. Drlg. 2,026 ft.

Seven Sisters—Duval County

S. and D. Daube No. 36 Campos, Sur. 224. R.U.
W. D. Daube & Co. No. 35 Campos, Sur. 224. Set 10-in. csg. 39 ft.; W.O.C.
Humble O. & R. Co. No. 20 Dowdy-fee, sec. 272. Set csg. 2,557 ft.; comp.; 84 B.P.D. on ⅞-in. ck.
Humble O. & R. Co. No. 21 Dowdy-fee, sec. 272. Set csg. 2,556 ft.; completing.
Humble O. & R. Co. No. 22 Dowdy-fee, sec. 272. Drlg. sh. 719 ft.

Sweden—Duval County

Hiawatha Oil Co. No. 3 Southland Life, Blk. 15. Drlg. 6,036 ft.

Thomas-Lockhart—Duval County

Lockhart Bros. No. 1 Parr, Sur. 277. D.S. T. 4,688-98 ft.; rec. 400 ft. mud, sd. and dist. in 45 min.; 40 lbs. W.P.; set csg.; W.O.C.

Pearsall—Frio County

Amerada Pet. Corp. No. 8 Haiff & Oppenheimer, S. A. Ditch Sur. 1,104 (W.O.). Set 7-in. protective csg. 10,341 ft.; drlg. plugs.

Slick—Goliad County

Dirks Bros. No. 2 Allen, Lot 24, Allen Subd., O. Marshall Sur. D.&A. 4,580 ft.

Darst Creek Extn.—Guadalupe County

Riddle Oil Co. No. 2 Williams, DeWitt Sur. R.U.
Stegal Oil Co. No. 1 Lay, J. K. Davis Sur. O.W.W.O.; old T.D. 2,429 ft.; R.U.

Dunlap—Guadalupe County

Sumas Prod. Co. No. 1 Burns, Highsmith Sur. T.D. 2,340 ft.; swbd. dry.

LaBlanca—Hidalgo County

Atlantic Ref. Co. No. 1 Lewis, Blk. 214. Drlg. 8,287 ft.
Dee, Davenport No. 1 Swallow, Blk. 215. Cg. 7,562 ft.
Kingwood Oil Co. and E. A. Graham No. 2 Yturria, 300 ft. E of No. 1, Porc. 100. R.U.

Sandia—Jim Wells County

O. W. Killam No. 9 Wade, Casa Blanca Gr. M.I.M.
Geo. E. Smith No. 3 Wade, 200-ac. tr., Casa Blanca Gr. S.D. 5,400 ft.
L. L. Smith et al No. 1 Allen, Wade ranch. Spd.

West Premont—Jim Wells County

Homer Presnall No. 1 Haufbauer, Lots 22 and 27, sec. 72. Sd. 3,503-14½ ft.; jetted S.W. and sd.; S.D.
Howard Presnall No. 1 Holmes, Lots 59 and 70, Blk. 76. Spd.

North Pettus—Karnes County

Magnolia Pet. Co. No. 16 Porter, B.&B. Sur. Sd. 3,721-24 ft.; bailing.
Magnolia Pet. Co. No. 17 Porter, B.&B. Sur. 23. R.U.

South Burnell—Karnes County

Dirks Bros. No. 1 Ruhmann, 177-ac. tr., Ballard Sur. M.I.M.
Luling O. & G. Co. No. 2 Boyce, Ballard Sur. R.U.

Kingsville—Kleberg County

Clark & Stilzig No. 3 Kivlin, Blk. 8, sec. 39. S.D. 80 ft.
Clark & Stilzig No. 1 O'Henry, Lot 2, sec. 49. O.W.W.O.; T.D. 2,641 ft.; P.B.; perf. and reperf.; completing.
Humble O. & R. Co. No. 6 Hughes, Blk. 39, Lot 1. D.&A. 4,018 ft.
Humble O. & R. Co. No. 10 Kleberg, 660 ft. W of No. 6 Hughes, Blk. 39. R.U.

Ezzell—McMullen County

Edwin M. Jones No. 6 Ezzell, NW¼ SE¼, Ragland Sur. 20. D.&A. 2,005 ft.
E. M. Jones No. 8 Ezzell, Russell Sur. Set csg. 1,552 ft.
E. M. Jones No. 9 Ezzell, Russell Sur. Drlg. 956 ft.

Jacob—McMullen County

Loma Oil Co. No. 9-B Jacob, Sur. 15. Drlg. 716 ft.

Loma Oil Co. No. 10-B Jacob, Sur. 15. Drlg. sh. 105 ft.

Loma Alta—McMullen County

J. T. Lanier No. 1 Hagist, SE¼, N½, Sur. 481. Drlg. 1,923 ft.

Agua Dulce—Nueces County

Conroe Drlg. Co. No. 1 Hagan & Stewart, sec. 206, Bishop Subd. Drlg. 6,473 ft.
Texon Drlg. Co. No. 2 Elliff, 3,054-ac. tr., Longorio Sur. R.U.
United Prod. Co. No. 1 Harvey, 1,100 ft. W line, 1,050 ft. N line, tr., M. Garza Sur. Set 5½-in. csg. 7,457 ft.; perf. csg 7,375-84 ft.; flwg. 112 B.P.D. fluid, reported 25 to 30% oil, remainder S.W. T.D. 9,003 ft.; P.B. 7,388 ft.; T.D. 7,389 ft.; plg. tbg. to rework.
United Prod. Co. No. 3-A Rivers, sec. 9, Peters Subd. Cg. sdy. sh. 7,383 ft.
United Prod. Co. No. 1 Schroeder, sec. 87, Paul Subd., Driscoll ranch. Set pro. csg. 5,473 ft.; W.O.C.

Clara Driscoll—Nueces County

Houston Oil Co. No. 3 Sevier, 77.1-ac. tr., Quadrilla Irr. Co. Sur. Recmtg. surf. csg. 985 ft.

Flour Bluff—Nueces County

Humble O. & R. Co. et al No. 1 Chapman, Lot 5, Blk. 41. R.U.
Humble O. & R. Co. et al No. 3 Cordz, Lot 14, Blk. 48. Drlg. sh. 6,600 ft.
Humble O. & R. Co. et al No. 1 Graham & Moulter, sec. 41. D.&A.; T.D. 6,771 ft.; sd. 6,686-6,741 ft. and 6,756-71 ft.; S.W.
Humble O. & R. Co. No. 2 Roberdeau, Lot 7, Blk. 49. Drlg. sh. 6,650 ft.
Humble O. & R. Co. et al No. 4 Robertson, Blk. 56. Set csg. 6,671 ft.; W.O.C.
Humble O. & R. Co. No. 1 Swan, Lot 1, Blk. 54. Drlg. hd. sh. 5,540 ft.
Humble O. & R. Co. et al No. 7 Webb, Lot 6, Blk. 47. Drlg. sh. 3,910 ft.

Luby—Nueces County

Seaboard Oil Corp. No. 1 Schaeffer, Blk. 3, Sh. 2, Luby Subd. T.D. 5,556 ft.; S.D.
Stanolind O. & G. Co. No. 1 McCann, 565.3-ac. tr. R.U.

Saxet Heights—Nueces County

W. H. Harrison No. 3 McConnell, Blk. 5, Oak Park Addn. R.U.
Kossth & Genecov No. 1 Rose, Lot 9, Blk. 11, Villareal Sur. Comp.; 25 B.P.D. on ¼-in. ck.; T.D. 4,904 ft.
Taylor Pet Co. No. 1 Taylor Ref. Co., Villareal Sur. Sd. 4,074-78 ft.; set csg.; comp.; 72 B.P.D. on ⅝-in. ck.
S. E. Wilson No. 1 Kaiser, 1¼-ac. tr., Ellendale Gardens No. 1. Sd. 4,064-67 ft.; set csg. 4,110 ft.; perf. 4,075-79 ft.; comp.; 92.8 B.P.D. on ¼-in. ck.

Saxet—Nueces County

C. Andrade No. 8 Frank, 48-ac. tr., Sur. 500. Drlg. 4,157 ft.
R. B. Bryant No. 8 Frank, 40-ac. tr., Sur. 500. Drlg. 4,147 ft.
Bentex Drlg. Co. No. 4 Harmon, 50-ac. tr., Sur. 416. T.D. 6,950 ft.; set csg.; perf. 6,886-90 ft.; tstd. S.W.; reperf.; to test.
Bryant & Howell No. 2 Plachy, Sur. 25. Set surf. csg.; W.O.C.
Bryant & Howell No. 3 Plachy, Sur. 25. Oil sd. 4,162-80 ft.; set csg. 4,253 ft.; W.O.C.
Crown Central Pet. Corp. No. 5 Hunter, Sur. 591. Sd. 4,397-4,405 ft.; comp.; est. 250 B.P.D. on ¼-in. ck.
Crown Central Pet Corp. No. 5 Page, 75-ac. tr. R.U.
Donico Prod. Co. No. 3 Donigan, 80-ac. tr., sec. 7, Rge. 6. Sd. 4,078-88 ft.; comp; 132 B.P.D. on ½-in. ck.
Donico Prod. Co. No. 5 Donigan, sec. 7, Rge. 6. Cg. 4,217 ft.
Donico Prod. Co. No. 6 Donigan, 80-ac. tr., sec. 7, Rge. 6. Drlg. below surf. csg.
L. Glasscock No. 1-A Johns, McGregor Sur. 582. Set csg. 1,000 ft.; W.O.C.
L. Glasscock No. 1-C Johns, McGregor Sur. 582. Drlg. 6,766 ft.
Tom Graham No. 5 Harmon, 34-ac. tr., Sur. 416. Drlg. 6,028 ft.
Hiawatha Oil Co. No. 12 Hutchins Stillwell, Blk. 34, Sheppard Farm Lots. T.D. 5,838 ft.; fsg.
Hiawatha Oil Co. No. 5-A Smith, Blk. 35, Sheppard Farm Lots. T.D. 5,307 ft.; sdtrkd. 4,800 ft.; set csg. 5,840 ft.; perf. 5,832-35 ft.; comp.; 127 B.P.D. on 5/32-in. ck.
Hiawatha O. & G. Co. No. 6-A Smith, Blk. 35, Sheppard Farm Lots. Comp.; est. 200 B.P.D. on 5/32-in. ck.; perf. 5,812-18 ft.
Hiawatha O. & G. Co. No. 6-B Smith, Blk. 35, Sheppard Farm Lots. Cg. g. sd. 6,744 ft.
Houston Oil Co. No. 6 Harrell, Blk. 13, Sheppard Farm Lots. Drlg. 4,345 ft.
Houston Oil Co. No. 6-A Harrell, Blk. 27, Sheppard Farm Lots. Drlg. 3,486 ft.
Houston Oil Co. No. 3 Isensee, Blk. 11, Sheppard Farm Lots. Drlg. 3,042 ft.
H. H. Howell No. 2 Kocurek, 57.4-ac. tr., Smith Sur. No. 25. Sd. 4,125-35 ft.; drlg. plugs.
Kepley Prod. Co. No. 5 Donnigan, 100-ac tr., sec. 7, Rge. 6. Sd. 4,422-27 ft.; comp.; 120 B.P.D. on ½-in. ck.; perf. 4,424-26 ft.
Maryland Corp. No. 1 Gallagher, 110.5-ac. tr., Smith Sur. 25. Cg. 4,140 ft.
Morgan & Chapman Minerals Corp. No. 9 Morgan-Clark, NE¼, Sur. 405. Drlg. 4,550 ft.
North Star Oil Co. No. 10-E Morgan, W½, SE¼, Sur. 405. Sd. 5,803-16 ft.; set 7-in. 5,816 ft.; drlg. plugs.
Phillips Pet. Co. No. 6 Hutchins, Blk. 29, Sheppard Farm Lots. Drlg. 6,586 ft.
Phillips Pet. Co. No. 7 Hutchins, 60-ac. tr., Sheppard Farm Lot 29. Set csg. 170 ft.; W.O.C.
Phillips Pet. Co. No. 3 Perkins-LaGasse, 40-ac. tr., Stevens Sur. A-406. Sd. 6,900-51 ft.; set csg. at T.D. 7,101 ft.; P.B. to test 6,700-ft. sd.; perf. 6,735-38½ ft.; clg.
Port O. & G. Co. No. 3 Cox & Cryder. Sd. 3,814-28 ft.; T.D. 3,852 ft.; D.&A.
Potter & Snowden No. 1 Taggert, Blk. 5, Sur. 401. S.D. 6,004 ft.
Renwar & Maryland No. 1-A Rand Morgan, Sur. 415. O.W.W.O.; old T.D. 5,825 ft. Sd. 6,687-92 ft. Tested high grav. oil; fsg. 6,865 ft.; S.D. reps. 6,015 ft.
Republic Nat. Gas Co. No. 20 Dunn, Blk. 38, Sheppard Farm Lots. Drlg. 5,815 ft.
Richardson Pet. Co. No. 6 Perkins-LaGasse, 20-ac. tr., Sheppard Farm Lot 22. Drlg. 2,975 ft.
Richardson Pet. Co. No. 10 Quiros, Blk. 36, Sheppard Farm Trs. Sd. 6,260-6,335 ft.; set csg.; reperf. 6,295-6,305 ft.; comp. no gauge.
Richardson Pet. Co. No. 12 Quiros, Sheppard Farm Lot No. 26. Drlg. 4,967 ft.
Richardson Pet. Co. No. 7 Sedwick, 124-ac. tr., Sur. 311. Cg. 6,597 ft.
Richardson Pet. Co. No. 10 Sedwick, Sur. 312. Drlg. 1,321 ft.
Ben F. Smith No. 1 Ocker, Villareal Sur. Set csg. 505 ft.; W.O.C.
Southern Minerals Corp. No. 5 Elder, 60-ac. tr., Sur. 311. Drlg. 4,312 ft.
Texon Drlg. Co. No. 8 Carter-Ocker-Till, Sur. 316. Drlg. 4,473 ft.
Texon Drlg. Co. No. 8 Kocurek, 156-ac. tr., Sur. 316. Sd. 4,552-56 ft.; comp.; 172 B.P.D., 30% S.W.
Texon Drlg. Co. No. 11 Ocker, Surs. 402 and 316, 174.21-ac. tr. Drlg. 4,415 ft.

Stratton—Nueces County

Camp Prod. Co. No. 2 Wardner, sec. 13, Stratton Subd. (Cor.); clg. pits 4,725 ft.

Sullivan—Nueces County

Lockhart et al No. 1 O. Purl, Lot 2, sec 7, Ross Peters Subd. No. 2. Sd. 7,032-52 ft.; tried to blow out; B.P. to sdtrk.

Midway—San Patricio County

Phillips Pet. Co. No. 2 Ivey, sec. "K," Paul Subd. Drlg. 5,217 ft.
Phillips Pet. Co. No. 2 Schmidt, sec. 83. Drlg. 4,722 ft.
Sun Oil Co. No. 1 Coggin, sec. 82. M.I.M.

Plymouth—San Patricio County

Humble O. & R. Co. No. 1 Baldwin, T. T. Williamson Sur. Drlg. hd. sd. 5,996 ft.
Plymouth Oil Co. No. 78-C Welder, sec. 70. Sd. 4,829-4,902 ft.; tstg.
Plymouth Oil Co. No. 79-C Welder, sec. 70. Tstg. 5,487 ft.
Sun Oil Co. No. 3 Roundtree, sec. 34, Lot 4. Cg. 5,689 ft.

Barbacoas—Starr County

K. E. Merren No. 1-A S.C.C.C., Blk. 34, Lambeth Subd., Porc. 89. Set csg. 5,417½ ft.; P.B. 5,108 ft.; cg. sdtrkd. hole 5,322 ft.
H. Mode No. 1 Starr County Cattle Co., Blk. 18, Jefferies Lambeth Subd., Porc. 89. R.U.

Cuevitas—Starr County

Sun Oil Co. No. 12-A Guerra, 660 ft. NW line, 2,220 ft. SW line, "A" Lse. Sd. 2,244½-56 ft.; tstg.

Los Olmos—Starr County

R. M. Mitchell No. 1 Bass, Blk. 6, Sur. 8. Drlg. 286 ft.

Ricaby—Starr County

Sioux Oil Co. No. 4 Ricaby, Porc. 83. Fsg. 1,896 ft.

Rio Grande City—Starr County

J. H. Clopton & Reed No. 5 Tijerina, Lot 12, Sh. 14-C, Porc. 80. Drlg. 210 ft.

El Tanque—Starr County

Sun Oil Co. No. 3 Wardner, Porc. 84. Sd. 1,761-72 ft.; set csg.; W.O.C.

Roma—Starr County

Texas Co. No. 6-A Guerra, Sh. 305-D, Porc. 67. Cg. 3,457 ft.

Bruni-Cole—Webb County

O. W. Killam No. 55 Bruni, Blk. 9, Sur. 8. Sd. 3,419-22 ft.; set csg. 3,410 ft.; T.D. 3,434½ ft.; comp.; 5 B.P.H.; sd. 3,423-34 ft.

Killam—Webb County

Humble O. & R. Co. No. 7 Laurel Bros., Sur. 333. Set csg. 2,030 ft.; sd. 1,985-92 ft.
O. W. Killam No. 7 Garcia, N½ Sur. 786. Sd. 2,283-90 ft.; set csg.; R.U. to pmp.
O. W. Killam No. 11 Garcia, Owens Sur. 786. Drlg. 109 ft.
Mills Bennett Prod. Co. No. 1 Garcia, 80-ac. tr., Sur. 786. R.U.

Lopez—Webb-Duval Counties

Valley Osage Oil Co. No. 5 M. Billings, Sur. 109. D.&A. 2,330 ft.

O'Hern—Webb County

Magnolia Pet. Co. No. 29 Benavides, Blk. 15, El Mesquite Gr. Comp.; 120 B.P.D.; sd. 2,843-50 ft.
J. J. O'Hern No. 1-E Benavides. D.&A. 2,994 ft.
Starr Dev. Co. No. 1 Benavides, 330 ft. N and W lines, Sur. 173. M.I.M.
Sun Oil Co. No. 12 Benavides, Blk. 509. Drlg. 2,607 ft.

LaSal Vieja—Willacy County

Shell Pet. Corp. No. 1 Yturria, Sh. 64, Carricitos Gr. (W.O.); set csg. 7,630 ft.; T.D. 10,286 ft.; P.B. 5,129 ft.; perf. 7,575-7,600 ft.

Escobas—Zapata County

Nordan & Morris No. 14 Bustamente, Sh. 33, Fansler Part. T.D. 1,147 ft.; comp.; 57 B.P.D.; pmpg.
Nordan & Morris No. 15 Bustimante, Sh. 33, Fansler Part. Sd. 1,143-50 ft.; comp.; 41 B.P.D.; T.D. 1,151 ft.
Nordan & Morris No. 17 Bustimante, Sh. 33, Fansler Part. R.U.
Nordan & Morris No. 30 Bustimante, Sh. 33, Fansler Part. R.U.
B. W. Roscoe No. 23 Bustimante, Sh. 33, Fansler Part. Comp.; 30 B.P.D.; T.D. 1,197 ft.
B. W. Roscoe No. 24 Bustimante, Sh. 33, Fansler Part. Comp.; 54 B.P.D.; T.D. 1,189 ft.
B. W. Roscoe No. 25 Bustimante, Sh. 33, Fansler Part. Comp.; 30 B.P.D.; T.D. 1,168 ft.
B. W. Roscoe No. 26 Busimante, Sh. 33, Fansler Part. Sd. 1,139-42 ft.; comp.; 40 B.P.D.
Texas Co. No. 103 Jennings, Cerrito Blanco Gr. Set csg. 1,259 ft.; comp.; 60 B.P.D.

Haynes—Zapata County

J. P. Nash No. 27 Haynes, Blk. 7, Haynes Subd. Sd. 1,080-84½ ft.; T.D. 1,099 ft.; W.O.P.

NORTH TEXAS WILDCATS

Archer County

O. P. Darsey No. 1 J. T. Longley, sec. 1839, T.E.&L. Sur. Tstg. S.S.O. 951-53 ft.; P.O.P.
Wm. F. Dodson No. 1 Harmonson, J. B Hinds Sur. A-193. Fishing 856 ft.
T. G. McCurdy No. 2 M. F. Martin, H. Grooms Sur. A-155. Fishing 980 ft.
W. B. Omohundro No. 1 J. Penartz, Clark & Plumb Sur. No. 4. Drlg. 1,063 ft.

Clay County

Foster Minerals Corp. No. 1 V. H. Yarbrought, M. Lassiter Sur. A-288. Drlg. 3,255 ft.
W. Gant No. 4 C. M. Worsham, sec. 38, G. P. Meade Sur. Drlg. 3,900 ft.

Collin County

F. Jones No. 1 Sherley, G. Morrison Sur. S.D.O. 3,003 ft.

Cooke County

Benton & Holmes No. 1 Gibson, J. English Sur. A-345. Drlg. 2,387 ft.
Kiel & Kiel No. 1 Sears, Barnett Sur. Drlg. 1,185 ft.
L. A. McWhirter, tr., No. 1 W. J. Davidson, Geo. Dooley Sur. A-301. Drlg. 710 ft.
F. W. Merrick, Inc., No. 1 Redman, J. W. Drummond Sur. Drlg. 1,020 ft.
J. G. Richards et al No. 1 J. A. Yosten, T. Scott Sur. A-90. Fishing.
Seitz, Comegys & Seitz No. 1 J. C. Whaley, J. Hagarty Sur. A-508, Drlg. 1,500 ft.
Texas Co. No. 1 J. F. Marshall, A. Burns Sur. A-49. Drlg. 5,925 ft.

Denton County

California Ref. Co. No. 1 W. & S. Life Ins. Co., B.B.B.&C. Sur. A-783. S.S.O. 1,481-65 ft; 6⅝-in. 1,460 ft.; W.O.C.; S.D.O.; drk. blown down.
Manning & Moore No. 1 Dora Ratchford, J. Walters Sur. T.D. 2,102 ft.; recmtg. 6⅝-in. 1,910 ft.
Regan & Davis No. 1 Williams, M.E.P.&P. Sur. A-927. Cem. surf. pipe and S.D.O.
Scroggins et al No. 1 S. M. Freeman, Bradshaw Sur. A-104. Spd. and S.D.

Foard County

O. P. Burnham No. 1 Ward, sec. 21, H.& T.C. Sur., Blk. 8. Drlg. 1,730 ft.

Grayson County

Denver P. & R. Co. No. 1 Cannon, A. Berry Sur. A-130. Cmtd. 6⅝-in. 2,388 ft.; S.S.O. 2,388-95 ft.; testing; est. 100 bbls.

Montague County

Montague Oil Co. et al No. 1 J. A. Brite, sec. 2882, T.E.&L. Sur. Drlg. 3,399 ft.
J. W. Sorrell et al No. 1 J. E. Walthall, S. H. Smith Sur. A-662. S.D. 2,000 ft.
Ventex Investments, Ltd., No. 1 S. E. Bell, sec. 11, M.E.P.&P. Sur. T.D. 3,220 ft.; S.D. water.

Wichita County

Golding & Cochran No. 1 Mrs. Grace Jennings, sec. 12, H.T.&B. Sur. Drlg. 1,190 ft.
W. B. Hamilton No. 1 Mrs. M. Parker, M. Ramsey Sur. A-471. Loc.
Jones & Cowden No. 1 Perkins & Cullum, sec. 21, D.C.S.L. Sur. S.S.O. 1,618-22 ft.; tstg.
LeBus No. 1 J. F. Miller, W. R. Eaves Sur. A-447. Drk.
W. B. Omohundro No. 1 First Natl. Co., sec. 28, W.V.F.L. Sur. Drk.
W. B. Omohundro No. 1 J. A. Kemp, Blk. 52, W.V.F.L. Sur. Drlg. 500 ft.
E. J. Stump No. 1 M. P. Bishop, L. Netherley Sur. A-240. R.U.R.
F. M. Tollett No. 1 J. L. Jackson, G. P. Marion Sur. A-184. Drlg. 750 ft.

Wilbarger County

Barry & Hayes No. 1 McGill, sec. 3, Blk. 9, H.&T.C. Sur. Drlg. 1,890 ft.
W. W. McDonald No. 3 Waggoner A, sec. 26, H.&T.C. Sur. Testing lime 3,638-54 ft. with acid; P.B. and tstg. S.S.O. 3,117-25 ft.

Wise County

Latex Oil Co. No. 1 C. R. Smith, J. Couch Sur. A-104. Showing gas 3,843-45 ft.; coring ahead.

Young County

H. J. Cox No. 1 W. T. Donnell, J. M. Smith Sur., sec. 1-7-1879. S.D.O. 1,810 ft.
Eppenauer Drlg. Co. No. 1 J. B. Hazelton, J. Harmon Sur. A-1607. Drlg. 1,750 ft.
T. D. Humphrey No. 1 S. R. Ragland, T. B. Kuykendall Sur. Drlg. 2,600 ft.
Lupton & Long No. 1 W. I. Gilmore, J. Gilmore Sur. A-2135. Drlg. 2,370 ft.
H. Zweifel No. 1 R. D. Sewell, M. Case Sur. A-1402. Gas sd. 3,752-4,050 ft.; tested 2,750,000 ft. gas; 5-in. cmtd. 4,333 ft.; W.O.C.

E. C. TEXAS WILDCATS

Anderson County

C & G Oil Co. No. 1 F. A. Newsom, 720 ft. from E and 330 ft. from S of tract, T. C. Lively Sur., 3 mi. NW of Percilla. M.I.R.
Humble O. & R. Co. No. 1 Mrs. S. Hassell, J. Beard Sur., 2 mi. N of Jarvis. Drlg.

Bowie County

Chew & Bassett No. 1 Barkman. S.D. 2,851 ft.
Ferguson & Hill No. 1 Breckenridge. S.D. 2,765 ft.
Woodley & Bentley No. 1 Lumpkin. S.D. 4,843 ft.

Falls County

E. B. Collard et al No. 1 P. Neikamp, W. Hampton Sur., 3 mi. E of Lott. S.D. 280 ft.
M. Hays et al No. 1 Mrs. J. J. Hodges, N. K. Robinson Sur., 5 mi. SW of Lott. Drlg. 972 ft.

Fannin County

Glazier & Trippe No. 1 N. Young, Hy Hitchcock Sur., 1½ mi. SW of Randolph in SW cor. of county. S.D. 312 ft.

Freestone County

Holt et al No. 1 W. H. Chambers, W. D. Allison Sur., 2¾ mi. N of Keechi 5,200-ft. test. R.U.
C. E. Rossiter No. 1 J. P. Fulton in J. P. Fulton Sur., 2½ mi. E of Donie. S.D. 956 ft.
Stroude et al No. 1 P. Mullens, R. D. Sloan Sur., 6 mi. NE of Fairfield. T.D. 341 ft.

Henderson County

American Liberty Oil Co. et al No. 1 LaRue & Johnson, Blk. 11, P. Jackson Sur., 2 mi. W of LaRue. Drk.
Wm. McDougall No. 1 Trinity, F. & S. Land Co., Blk. 1, H.&T.C. Sur. Drk.
Tide Water Assoc. et al No. 2-C McElreath & Suggett, W. P. Wyche Sur. Georgetown 5,070 ft.; top Paluxy 6,087 ft.; top Glen Rose 6,282 ft.; drlg. 7,500 ft.

Limestone County

J. Johnson No. 1 E. M. Speight, A. Valera Sur., 8 mi. SE of Mexia. Loc.
Pure Oil Co. No. 16-T Kendrick, P. Varella Sur., Mexia field. S.D. 6,384 ft.; pipe stuck.
Stanolind O. & G. Co. No. 1 T. Nores, in Thresher Sur., 5 mi. N of Kosse; 6,500-ft. test. Loc.

Nacogdoches County

G. C. Collier and Corley No. 1-A A. T. Mast, 14 mi. SW of Nacogdoches, T. S. Lambert Sur., 750 ft. N of No. 1. R.U.

Navarro County

Mues & Low No. 1 C. Berry, 1 mi. N of Dawson, in W. H. Moss Sur., formerly McCullough et al No. 1 Berry. O.W.D.D.; S.D. 1,600 ft.
T. Sharpe et al No. 1 E. B. McDowell, T. Jordan Sur., ½ mi. S of Bassets. S.D. 2,300 ft.

Red River County

Roy I. Carter Drlg. Co. No. 1 J. A. Tutt, C 40-ac. tr. in D. Hart Sur., 2 mi. S of Avery. S.D. 410 ft.
Texas Trading Co. No. 1 Southern Pine Lbr. Co., D. Burton Sur., 12 mi. N of Clarksville. S.D. 550 ft.

Rusk County

General Crude and others No. 1 Bivins Est., R.U. R. Williams Sur., 6 mi., N of Latum. Drlg. 5,866 ft.
J. Merrick et al No. 1 Tipps, T. Uzzell Sur., 6 mi. S of East Texas field. Top sd. 3,886 ft.; S.D. 3,890 ft.
Nivia Oil Co. No. 1 Citizens Natl. Bank, M. D. Carmel Sur. 2½ mi. SE of Henderson. Drlg. 5,065 ft.
J. W. Shipman et al No. 1 Citizens Bank, J. J. Y'Barbo Sur., 4 mi. NE of Henderson. S.D. 4,340 ft.

Upshur County

F. W. Maddox No. 1 S. T. Buie, J. M. Dunn Sur., 4 mi. E of Gilmer. Austin 3,629 ft.; top Woodbine 3,717 ft.; T.D. 3,751 ft.

EAST TEXAS

(Border Counties)

Cass County

Bay Oil Corp. No. 1 W. R. Cobb, G. Crowder Sur. Comp.; flw. 8 B.P.H.; T. D. 6,105 ft.
Bay Oil Corp. No. 1 W. B. Parker, G. Crowder Sur. Comp.; 130 B.P.D.; T.D. 6,065 ft.
Magnolia Pet. Co. No. 4 Allday, P. Evans Sur. 7-in. cmtd. 5,991 ft.; T.D. 6,075 ft.
Magnolia Pet. Co. No. 3 W. M. Hall, Wilson Robinson Sur. Comp.; flw. 269 B.P.D.; T.D. 6,076 ft.
Magnolia Pet. Co. No. 18 L. Haywood, P. Evans Sur. T.D. 6,031 ft.; perf. and tstg.
R. W. Norton No. 4 Davis, H. Holbert Sur. Drlg. 4,842 ft.
R. W. Norton No. 1 Hussey, P. Evans Sur. Drlg. 4,800 ft.

R. W. Norton No. 8 Davis, H. Holbert Sur. Drlg. 6,067 ft.
R. W. Norton No. 1 W. & E. Starke Dudley Gilliam Sur. Comp.; flw. 17 B. P.H.; T.D. 6,000 ft.
R. W. Norton No. 2 W. and E. Starke, D. Gilliam Sur. Drlg. 5,560 ft.
Ohio Oil Co. No. 20 E. P. Willis, S.F.I.W. Sur. Drlg. 2,150 ft.
W. G. Ray Drlg. Co. No. 2 Parker, G. Crowder Sur. Comp.; flw. 15 B.P.H.; T.D. 6,045 ft.
United Prod. Co. No. 4 Allday, P. Evans Sur. Drlg. 5,194 ft.
United Prod. Co. No. 1 Baugus Unit, Cass Co. Sch. Ld. Sur. Drlg. 4,545 ft.
United Prod. Co. No. 2 Baugus Unit, Cass Co. Sch. Ld. Sur. Drlg. 3,922 ft.
United Prod. Co. No. 1 fee, H. Holbert Sur. Drlg. 5,726 ft.
United Prod. Co. No. 1-A Starke, D. Gilliam Sur. Drlg. 2,096 ft.
United Prod. Co. No. 2-A Starke, D. Gilliam Sur. R.U.

Marion County—Rodessa

Arkansas-La. Gas Co. No. 1 Emma Ford, A. D. S. Coy Sur. Drlg. 2,393 ft.
Arkansas-La. Gas Co. No. 1 J. P. Fant, L. P. Cadenhead Sur. Drlg. 5,938 ft.
Arkansas-La. Gas Co. No. 1 R. H. Woods, J. C. Eaton Sur. T.D. 2,628 ft.; D.&A.
Fohs Oil Co. No. 1 Mary Reynolds, A. D. S. Coy Sur. T.D. 6,063 ft.; tstg.
Gulf Prod. Co. No. 1 L. Henderson, R. Bennington Sur. R.U.
Holcomb & Thomason No. 1 L. Henderson, C Lots 4 and 6, R. Bennington Sur. R.U.
Mid-Continent Pet. Corp. No. 2 Sory, A. D. S. Coy Sur. R.U.
Mid-Continent Pet. Corp. No. 3 Sorry, A. D. S. Coy Sur. Drlg. 1,000 ft.
Hunter Co. No. 3 Fonda, A. D. S. Coy Sur. R.U.
United Prod. Co. No. 1 Hutchinson, A. D. S. Coy Sur. Cg. 5,960 ft.

Panola County

Danciger O. & G. Co. No. 1 Tatum, A. Bissell Sur. Drlg. 3,240 ft.
Glassell & Glassell No. 1 Pierce & Chesbro, Julia Soape Sur. T.D. 5,881 ft.; S.D.; W.O.
Magnolia Pet. Co. No. 2 E. A. Hull, Thos Applewhite Sur. Drlg. 7,250 ft.

Shelby County

Portex Oil Co. No. 3 W. R. Pickering, A Hanson Sur. Drlg. 4,900 ft.
Wm. Redditt No. 1 Pickering Lbr. Co., SE cor. Stephens English Sur. T.D. 4,108 ft.; acd. 2,000 gals.; prep. set csg.; gas flow about 4,000,000 ft. per day; T.D 4,108 ft.; S.D.; W.O.
Siler and Riley No. 1 Rushing, M. Smith Sur. Drlg. 2,980 ft.

WEST TEXAS WILDCATS

Andrews County

Amerada Pet. Corp. No. 1 L. Littman sec. 6, Blk. A-29, P.S.L. Sur. Drlg. 4,774 ft.
American Liberty O. Co. No. 1 E. Cowden 660 ft. N and 1,980 ft. W. sec. 14, Blk A-55, P.S.L. Sur. Drlg. 4,263 ft.
W. G. Blanchard et al No. 1 Cox, C SW sec. 4, Blk. A-30, P.S.L. Sur. Drlg. 4,240 ft.
M. J. Delaney No. 1 E. P. Moore, sec. 12, Blk. A-20, P.S.L. Sur. Cg. 4,348 ft.
Drlg. & Expl. Co. No. 1 Thornberg, sec. 8, Blk. A-42, P.S.L. Sur. Loc.
M. S. Forgeron et al No. 1 Lockhart & Brown, C NE¼ sec. 20, Blk. A-41, P.S.L. Sur. S.D. 179 ft.
Sinclair Prairie Oil Co. No. 2 Emma Cowden, sec. 11, Blk. 44, Twp. 2n, T.&P. Sur. T.D. 4,345 ft.; tstg.
Hargrove et al No. 1 Riordan, NW¼, sec. 10, Blk. A-44, P.S.L. Sur. Drlg. 4,475 ft.
Landreth Prod. Co. No. 1 L. Jones, sec. 11 Blk. A-42, P.S.L. Sur. Fsg. 4,416 ft.; ran whipstock.

Bailey County

Etz & Robinson No. 1 Enochs, Tract 66, League 182, Floyd Co. School Lands Sur. S.D. 225 ft.; P.B. to 4,460 ft.; to perf. csg. and test.
E. L. Wilson et al No. 1 Yellow House Land Co., Labour 4, Abner Taylor Lge. 700. Elev. 3,687 ft.; S.D. 4,525 ft.

Brewster County

F. C. Dodson No. 1 Texas American Synd., sec. 66, Blk. 10, G.H.&S.A. Sur. Drlg. 5,707 ft.
Storey No. 1 Wilson, sec. 3, Blk. 212, T.& St.L. Sur. Drlg. 2,505 ft.

Cochran County

Ingleright & Fogelson No. 1 Houston, Drlg. 5,012 ft.
Pete Wiggins et al No. 1 C. Slaughter Dean, C Lab. 26, League 92, Lipscomb Co. Sch. Ld. Drlg. 4,761 ft.

Coke County

H. E. Ogden et al No. 1 Rawlins, sec. 390, Blk. 1-A, H.&T.C. Sur. S.D. 515 ft.

Crane County

Gulf Oil Corp. No. 2 McKnight, sec. 9, Blk. B-21. Drlg. 5,404 ft.; P.B. to 3,450 ft.; S.D.; to move in rotary.

Crockett County

R. H. Henderson No. 1 C. B. Haun et al Fishing 1,303 ft.; flowing sulfur water.
Moore Bros. No. 1 P. Perner, 1,320 ft. from N and W of sec. 37, Blk. 2, I.&G.N. Sur. Drk.
Superior Oil Co. of Calif. No. 1 J. S. Todd, C SE¼ sec. 55, Blk. UV, G.C.&S.F. Sur. Drlg. 7,424 ft.

Dawson County

R. Allbaugh No. 1 Higgenbotham, Labour 24, League 269, Moore Co. Sch. Lds. Loc.
R. Albaugh No. 1 D. Hogg, SE of SE sec. 17, Blk. 34, 4n, T.&P. Sur. Loc.
E. L. Wilson No. 1 Scanlon, Sec. 83, Blk M., E.L.R.R. Sur. T.D. 4,497 ft.; R.U. S.T.

Dickens County

C. E. Litchfield No. 1 Harris, sec. 354, Blk. 1, H.&G.N. Sur. S.D. 1,080 ft.

Edwards County

A. P. Carter No. 1 F. D. Sweeten, S&E sec. 48, Blk. 2, B&B Sur., 1½ mi. E of Rock Springs. S.D. 700 ft.

Ector County

Fuhrman Pet. Corp. No. 1 E. Cowden, sec. 41, Blk. 43, Twp. 2s, T.&P. Sur. R.U.R.
Phillips Pet. Co. No. 1 Gist, sec. 2, Blk. 42, Twp. 2s, T.&P. Sur. Drlg. 4,300 ft.
Shasta Oil Co. No. 1 K. Sands, sec. 32, Blk. 44, T.&P. Sur. Drlg. 3,030 ft.

Fisher County

Anderson & Kerr No. 1 Caldwell, sec. 169, Blk. 2, H.&T.C. Sur. Drlg. 800 ft.
Lewis Prod. Co. No. 1 Marrow, sec. 172, Blk. 2, H.&T.C. Sur. Drlg. 3,412 ft.

Gaines County

Amerada Pet. Corp. No. 1 Cox, NW cor. sec. 380, Blk. G, C.C.S.D.&R.G.N.G. Sur. Drlg. 2,000 ft.
Amerada Pet. Corp. No. 1 A. Faskin, sec. 160, Blk. G, W.T.R.R. Sur. Drlg. 5,323 ft.
Amerada Pet. Corp. No. 1 Matthews, sec. 417, Blk. G, C.C.S.D.&R.G.N.G. Sur. W.O.C. 4,775 ft.
Argo Royalty Co. No. 1 Jones. Drlg. 4,676 ft.
Carter et al No. 1-B Wasson, sec. 47, Blk. AX, P.S.L. Sur. Drlg. 4,731 ft.
A. G. Carter et al No. 1 Moore-Langdon sec. 44, Blk. A, P.S.L. Sur. T.D. 4,960 ft.; swbd. and flwd. 10 B.P.H.
Continental O. Co. No. 1 Jones, sec. 22, Blk. A-7, P.S.L. Sur. T.D. 5,040 ft.; swbg. through tbg.
Continental Oil Co. No. 1 Moore, sec. 46, Blk. AX, P.S.L. Sur. Drlg. 4,522 ft.
F. N. Sloan et al No. 1 Barber, NE cor. sec. 19, Blk. A-28, P.S.L. Sur. T.D. 4,775 ft.; R.U.R.

Glasscock County

Moore Bros. No. 1 King, sec. 46, Blk. 36, Twp. 1s, T.&P. Sur. Drlg. 3,600 ft.

Hockley County

Frank A. Bates No. 1 Lockett, C of NE of SW sec. 5, Blk. 1, P.S.L. Sur. Drk.
R. F. Duggan et al No. 1 Yellow House Land Co., cen. Labour 11, League 718. State Capitol Lds. Drlg. 4,400 ft.
Stanolind O. & G. Co. No. 1 A. A. Slaughter, C SW¼ Labour 76, League 37. Zavalla Co. Sch. Lds. Sur. T.D. 4,770 ft.; R.U.S.T.

Howard County

Iron Mt. Oil Co. No. 1 D. H. Snyder, sec. 28, Blk. 30, Twp. 1s, T.&P. Sur. Drlg. 2,843 ft.
W. F. McDermott et al No. 1 Lucas, sec. 18, Blk. 29, Twp. 1n, T.&P. Sur., 5 mi. N of Dodge pool. Drlg. 120 ft.

Hudspeth County

Haymon Krupp Oil & Ld. Co. No. 1 Thaxton, SE¼ sec. 34, Blk. 74, Twp. 6. Cmtd. csg.; fsg. 3,076 ft.

Jeff Davis County

H. D. Wilcox et al No. 1 Jones-Coffield. Drlg. 2,570 ft.

Loving County

Barnett Pet. Co. No. 1 Johnson, sec. 2, Blk. 57, Twp. 1, T.&P. Sur. Drlg. 985 ft.
Barnett Pet. Corp. No. 2 W. D. Johnson, sec. 12, Blk. 56, Twp. 1, T.&P. Sur. Drk.
Continental Oil Co. No. 1 E. C. Marrs, sec. 20, Blk. 54, Twp. 2, T.&P. Sur. R.U.
Woodley Pet. Co. No. 1 Kioh, sec. 21, Blk. 55, Twp. 1, T.&P. Sur. Fsg. 3,461 ft.

Mitchell County

Harris & Anderson No. 1 A. F. King, sec. 11, Blk. 28, Twp. 1s, T.&P. Sur. Drlg. 1,500 ft.
Mitchell O. & G. Co. No. 1 Z. Morrison, sec. 36, Blk. 29, Twp. 1n, T.&P. Sur. Drlg. 2,976 ft.

Nolan County

M. S. Ingleright & L. E. Hults No. 1 Blank, Blk. 1-A, H.&T.C. Sur., near Decker, 4,000-ft. test. Loc.

Pecos County

Cannon & Cannon No. 1 University, sec. 2, Blk. 20. Drlg. 1,210 ft.
Dobbs No. 1 University, sec. 30, Blk. 18. Drlg. 1,800 ft.
K. Kimberlin No. 1 Humble-Young, sec. 49, Blk. 10, H.&G.N. Sur. Drlg. 1,323 ft.
Phillips Pet. Co. No. 1 Grierson, sec. 71, Blk. QW, T.C.R.R. Sur., 10 mi. NW of Fort Stockton. S.D.
G. J. Smith No. 1 W. E. Smith, sec. 37, Blk 1, I.&G.N. Sur. Drlg. 2,115 ft.
Tex-Mex Pet. Co. No. 1 Williams, sec 79½, Blk. 8, H.&G.N. Sur. Drlg. 2,345 ft.
S. Thompson No. 1 Elsinore Cattle Co. sec. 54, Blk. D, G.C.&S.F. Sur. Drlg. 5,467 ft.
Trans-Pecos Oil Co. No. 1 Popham. T.D. 535 ft.; lost hole; skidded drk.
Young No. 1 Perry, sec. 3, Blk. Z, T.C. R.R. Sur. Drlg. 2,010 ft.

Presidio County

L. C. Brite No. 4 fee, C NW¼ sec. 113, Blk 12, G.H.&S.A. Sur. Drlg. 3,959 ft.
A. H. Main No. 1 Greenlee, sec. 40. Blk 347, 13 mi. NE of Marfa. No report.
Sadler Bros. et al No. 1 Bagley. S.D. 3,315 ft.

Reagan County

K. E. Sherman No. 1 W. E. Friend, SW cor. sec. 3, Wm. Allen Sur. Drlg. 1,651 ft.
Moore Bros. No. 1 University, sec. 8, Blk. 7. Spudded and S.D.

Reeves County

Barnett Pet. Corp. No. 1 Ely, sec. 38, Blk. 71. P.S.L. Sur., 12 mi. NW of Toyah. Drlg. 977 ft.
General Crude Oil Co. No. 1 T. P. Land Trust, C NE¼ sec. 15, Blk. 56. Twp 2, T.&P. Sur. S.D. 3,100 ft.; top Gray L. 3,060 ft.

Runnels County

Hall Oil Co. No. 1 Beddo, sec. 51, Thompson Casey Sur. R.U.R.
K Z Oil Co. No. 1 B. Fletcher, E. C. Good Sur. Drlg. 1,400 ft.
Price & Kramer No. 1 Giesecke, Blk. 227, Hughes Sur. S.D. 2,503 ft.
Stevens & Glover No. 1 Fowler, sec. 150, E.T.R.R. Sur., 2 mi. NE of Ballinger S.D. 480 ft.

Schleicher County

J. M. Cooper No. 2 B. Page, sec. 40, Blk. L, G.H.&S.A. Sur. Drlg. 2,576 ft.
Tex.Tor Oil Corp. No. 1 Judkins & Spencer, C of SW¼ sec. 33, Blk. A, A.&B. Sur. Drlg. 1,747 ft.

Scurry County

C. W. Guthrie et al No. 1 F. W. Hardee, sec. 99, Blk. 97, H.&T.C. Sur. S.D.

Terry County

Anthony & Rice No. 1 Brownfield, C NW¼ sec. 28, Blk. A-1, E.L.R.R. Sur. T.D. 4,536 ft.; R.U.S.T.
Crump & Corrigan No. 1 Lewright, 660 ft. NE, sec. 1, Blk. C-37, P.S.L. Sur. T.D. 5,138 ft.; P.B. to 4,996 ft.; S.D.
R. L. Foree No. 1 A. E. Pool, sec. 54, Blk D-11, D.&S.E. Sur. S.D. 4,847 ft.; R.U. S.T.

Upton County

Maverick Oil Co. No. 1- Holmsley, sec. 16, Blk. B, C.C.S.D.&R.G.N.G. Sur., 14 mi. NE of Rankin. S.D. 2,038 ft.

Ward County

F. H. Murphy et al No. 1 Monroe, sec. 210, Blk. 34, H.&T.C. Sur. T.D. 4,025 ft.; W.O.C.
Mahres No. 1 Wilson, sec. 133, Blk. 34, H.&T.C. Sur. S.D. 5,085 ft.; balling.
L. F. White et al No. 1 Rector-Monroe, E cor. sec. 3, Blk. 1, W.&N.W. Sur. Top Del. L. 4,635 ft.; top Del. sd. 4,670 ft. T.D. 4,705 ft.; shot 80 qts. 4,680-4,705 ft.; C.O.

Winkler County

Champlin No. 2 Cowden, sec. 2, Blk. 12, P.S.L. Sur. T.D. 2,925 ft.; to shoot.

Yoakum County

Bahan et al No. 1 Shook Est., sec. 420, Blk. D, John H. Gibson Sur. T.D. 5,418 ft.
Bohago & Bond No. 1 West, sec. 606, Blk. D. Coring 5,016 ft.
Denver Dev. Co. No. 1 Whittenburg, sec. 831, Blk. D, J. H. Gibson Sur. Drlg. 4,247 ft.
Moore Bros. No. 1 Cleveland, sec. 706, Blk. D. J. H. Gibson Sur. Drlg. 712 ft.
Texas Co. No. 1 Walker. W.O.C. 4,650 ft.

RANGER (CENTRAL TEXAS) DISTRICT

Brown County

W. T. Daniels et al No. 1 Joyner, 1 mi. S Brownwood, T. Smith Sur. No. 600, Abst. 821. Loc. for Ranger test.
Garland Moore et al No. 1 T. S. Williams, 1 mi. NE Grosvenor. Sec. 40, H.T.&B. Sur., Abst. 2037. Spdg. & S.D.

Callahan County

Hal Hughes No. 1 Poindexter, 330 ft. fr. N&E of sec. 350, Geo. Hancock. Sur. 2 mi. NE of Oplin. S.D. 460 ft.
J. C. Jackson et al No. 1 Thompson, 2 mi. S. Eula, sec. 30, B.B.B.&C. Sur. Drlg. 1,225 ft.
Hugh King, Jr. et al No. 1 K. B. Legett, 7 mi. W Clyde, sec. 7, Blk. 8, S.P.R.R. Sur. Drlg. 300 ft.
R. F. St. John No. 1 J. A. Hinshaw, Subd. 9, sec. 29, S.P.R.R. Sur., Blk. 8. Loc.

Coleman County

Dixie O.&G. Co. No. 1 Reaves, 6 mi. NW Bangs, J. M. Rhine Sur. No. 629. S.D. 805 reprs.

Comanche County

N. D. Gallagher et al No. 1 Mrs. B. I. Terry, Desdemona pool, N. H. Kuykendall Sur. Drlg. 3,700 ft.

Eastland County

Monark O. & G. Co. No. 1 Downtain, sec. 14 H.&T.C. Sur. Blk. 4, 3 mi. N Eastland. S.D. 1,250 ft.

Erath County

Jess Hickey et al No. 1 W. M. Martin, 2 mi. SE Desdemona. D. J. Otho Millard Sur. A-533. S.D. 1,750 ft.

Haskell County

E. W. Marland & H. B. Drake No. 1 Corothers, 6 mi. S Haskell, sec. 67, D. E. Zaaz Sur. Drlg. 1,675 ft.

Jack County

Bennett Pet. Corp. No. 1 J. S. Rhodes, 2½ mi. NE Bryson, 250 ft. from S and 330 ft. from W of W. Higgins Sur., Abst. 2,199. Loc.
H. E. Gerke No. 1 Cash, 3½ mi. NE Bryson, 990 ft. from E and 330 ft. from S lines of farm in I. White Sur., Abst. 895. Spud. and S.D. to R.U.R.
G. M. Gillespie No. 1 O. Loving, sec. 3345, T.E.&L. Sur., 2 mi. SE Jermyn. O.S. 3,169-74 ft.; testing.
W. H. Hammon, 1 mi. N Rhodes pool. Setting surf. pipe.
Fred Herschback No. 1 Newman, 3 mi. N Bryson, W of Jno. Matlock Sur., Abst. 1,812. Drlg. 2,360 ft.
H. B. Madden No. 1 J. L. Mask, sec. 2708, T.E.&L. Sur. S.D. 1,831 ft.
O. J. Murray No. 1 W. J. Eatherly, J. Helmstutler Sur. Drlg. 478 ft.
T. C. Patton No. 1 J. R. Williams, B.S.&F. Sur., 5 mi. SE Rhodes pool. S.D. 3,916 ft.; reperf.
R. A. Westbrook No. 1 W. Knox, sec. 83, B.B.B.&C. Sur. S.D. 1,560 ft.

Jones County

Bond Oil Corp. & Harrison No. 1 Little, 3½ mi. NE Avoca, 330 ft. from N and W of SW¼ sec. 172, B.B.B.&C. Sur. Spdg.
Fain & McGaha Oil Corp. No. 1 Akens, 3 mi. SW Hawley, 220 ft. from N and E of sec. 18, T.&P. Sur., Blk. 16. Drlg. 150 ft.
Fain & McGaha Oil Corp. No. 1 Minter, 3 mi. NW Hawley, Lot 12, Robt. Smith Sur. No. 192, R.U.
Fain & McGaha Oil Corp. No. 1 J. H. Wheeler, 3 mi. NW Sandy Ridge pool, sec. 55, O.A.L. Sur. Fsg. 1,620 ft.
W. B. Hamilton No. 1 Bertie Thompson, ½ mi. N Hawley, Lot 6, G. Martinez Sur., Blk. 194. Drlg. 1,850 ft.
Humble O. & R. Co. No. 1 Teaff Est., sec. 33, T.&P. Sur., Blk. 18. Drlg. 5,450 ft.
C. J. Kleiner No. 1 Guitar, 3 mi. S Sayles pool, sec. 50, Blk. 16, T.&P. Sur. Drlg. 1,200 ft.
Lewis Prod. Co. No. 1 Rutledge, 1 mi. NW Sayles pool, Lot 32, sec. 2, T.&P. Sur., Blk. 20. Sdw. L. 1,924-28 ft.; sd. 1,928-29 ft.; tstg.
M. A. Mead No. 1 H. Osment. Drlg. 410 ft.
W. H. Peckham No. 1 Davis et al, 3 mi. SW Lueders. Subd. 8, F. M. Smith Sur. No. 3. Drlg. 1,780 ft.
John L. Reeves No. 1 Minter, 4 mi. N Hawley, 220 ft. from N and 150 ft. from E of S½ SE¼ sec. 26, T.&P. Sur., Blk. 15. M.I. spdr.
Riddle et al No. 1 J. D. Freeman, 8 mi. SW Anson, sec. 6, T.&P. Sur., Blk. 17. T.D. 2,245 ft.; fsg.
Southern Oil Co. No. 1 B. W. Thane NE cor. County. Andrew Jones Sur. 114. S.D. 1,200 ft.
H. A. Swann Jr. No. 1 Keith & Swann, Blk. 68, Hawley Twest Sur. Loc.
L. B. Tannehill et al No. 1 Willis, 2 mi. NW Sandy Ridge pool, sec. 2, J. C. Patton Sur. T.D. 2,070 ft.; U.R. 6-in.
Ungren & Frazier et al No. 1 S. W. Harvey, 3 mi. SE Nugent, sec. 20, Blk. 14, T.&P. Sur. Drlg. 1,450 ft.
Ungren & Frazier No. 1 Melton, 4½ mi. SW Hawley, 1,100 ft. from N and E of farm in John Winters Sur. Drlg. 200 ft.

Palo Pinto County

Paul Garrett No. 1 Mabry heirs, NE cor. county, sec. 2,572, T.E.&L. Sur. S.D. 470 ft.
Lone Star Gas Co. No. 1 Hart Oil Corp., CWL county, 2,665 ft. from E and 2,667 ft. from S of sec. 19n, T.&P. Sur., Blk. 3. Loc. for 4,000-ft. test.

Shackelford County

Humble O. & R. Co. No. 4 Geo. DeLafosse, E C line county, sec. 1550, T.E.&L. Sur. Set 6⅝-in. 4,348 ft.; W.O.C.
M. P. Moore et al No. 1 Geo. Gray, W side Bluff Creek pool, sec. 208, E.T.R.R. Sur. L. 1,813-16 ft.; U.R. 6⅝-in.

Stephens County

Barnett Pet. Corp. No. 1 J. Q. Corbett, 4 mi. SE Ivan, sec. 3, S.P.R.R. Sur., Blk. 3. Drlg. 2,200 ft.
Clark & Cowden et al No. 2 Echols Heirs, Blk. 3. Drlg. 3,750 ft.
Cox & Caprito No. 1 Donnell, 1 mi. SW Eliasville, sec. 1,208, T.E.&L. Sur. Drlg. 1,200 ft.
Dean Bros. & Fortex Oil Corp. No. 1 Watson, 5 mi. SW Caddo, sec. 28, T.&P. Sur., Blk. 6. Loc.
W. B. Hamilton No. 1 B. O. Grant, CWL of county, 1,452 ft. from N and 2,384 ft. from W of sec. 63, B.A.L. Sur. Loc. for 2,500-ft. test.
O. J. Perren No. 1 J. K. P. Hughes, NE cor. County of NW¼ sec. 6 A.B.&M. Sur., Abst. 2,683. S.D. 3,360 ft.
Philtop O. & G. Co. No. 1 T. M. Corbett 8 mi. NE Caddo, Edward Romershausen Sur., Abst. 149. Sd. 3,952-57 ft.; T.D. 4,008 ft.; testing.
W. J. Rhodes No. 1 Black Bros., 8 mi. NE Breckenridge, sec. 1,135, T.E.&L. Sur. Drlg. 950 ft.

Stonewall County

General Crude Oil Co. No. 1 W. J. Bryan, 7 mi. N Hamlin, Subd. 10, Wm. Vardeman Sur. No. 347. S.D. 3,735 ft.

Tarrant County

E. E. Hoffpauir et al No. 2 W. H. Davis, 2 mi. S Arlington, H. Blackwell Sur. S.D.O. 2,140 ft.

Taylor County

Louis Davis No. 1 E. Lincicum, NE cor. county, 350 ft. from N and 500 ft. from E of NW¼ sec. 21, B.A.L. Sur. Loc.

Throckmorton County

Long & Bedner No. 1 Everett, 9 mi. S Throckmorton, sec. 1,615, T.E.&L. Sur. Treated 6,000 gals.; W.O.A.

Wise County

Latex Oil Co. No. 1 Smith, 3 mi. E of Bridgeport, Jas. Couch Sur. T.D. 3,850 ft.; prep. to core.

PERSONAL

DR. GUSTAV EGLOFF, director of research for the Universal Oil Products Company, Chicago, has returned from Europe, where he attended the World Petroleum Congress in Paris, and was elected its vice president. He visited 14 countries while overseas.

DAVID HARVEY PHILLIPS, Bradford, Pa., oil man, is chief beneficiary in the will of the late MRS. WALTER A. HOWARD of Geneva, N. Y., an aunt of Mr. Phillips. He receives $50,000 in cash and Mrs. Howard's oil and gas holdings in the Allegany field in New York. One-fifth of the residuary estate and a $50,000 trust fund are left for his children. Mrs. Howard was formerly Margaret Phillips, only daughter of the late DAVID PHILLIPS, a noted oil-field toolmaker in the eighties and nineties.

R. WELLS GILES, Shreveport, La., oil man, has been appointed vice president and local manager of the recently organized Louisiana Oil Producing Company of Boston, which has purchased extensive holdings in the Pine Island and other North Louisiana areas.

H. C. GRIFFIN, manager of the Peoria, Ill., sales division of the Standard Oil Company of Indiana since November 1, 1926, will retire from active duty September 1, after 39 years of service, PRESIDENT EDWARD G. SEUBERT announced. H. G. ROUNDS, assistant manager in charge of wholesale sales in St. Louis, will succeed Mr. Griffin in Peoria; D. J. BYERS, assistant manager at Sioux City, Iowa, will succeed Mr. Rounds; W. C. KNIEFEL, reseller sales promoter in the Chicago general offices, will succeed Mr. Byers.

J. P. RUCKMAN, district superintendent for the Humble Oil & Refining Company in the Hurdle district, West Texas, has been transferred to the Gladewater district in East Texas, in the same capacity.

HENRY G. HUNT has resigned as secretary of the Oil and Gas Association of Michigan and of the Michigan Petroleum Industries Committee. He is leaving the association, for which he has served as public relations man and contact man with the Michigan legislature, to join the Lupher Drilling Company in a general executive capacity.

ROBERT M. KLEINPELL, assisted by ROBERT WHITE and L. FORREST, has been placed in charge of Richfield Oil Corporation's newly established micropaleontological laboratory in Bakersfield, Calif. ROLLINS ECKIS is in charge of Richfield's geological department in Bakersfield, assisted by DREXLER DANA and JOSEPH LE CONTE doing geophysical work and JAMES WEST, CORDELL DURRELL, DON BIRCH and PATRICK KELLY doing geological work.

C. W. ROBINSON, independent operator in Shreveport, La., is passing his vacation in Colorado.

A. C. GLASSELL, affiliated with his son in the independent firm of Glassell & Glassell, Shreveport, La., is spending a vacation in Canada.

H. JAMES LEWIS, president of the Sunset Oil Company, has purchased a two-acre tract in Encino, Calif., and contemplates erection of a new home.

B. F. HOLMES, independent gas operator in Shamrock, Tex., won the Texas State Senior Golf Association championship in a tournament held in Amarillo, Tex.

THOMAS BEMIS, of Los Angeles, has joined the Standard Oil of California's group in the San Joaquin Valley as petroleum engineer at Taft in the Midway-Sunset field.

CHARLES B. BUERGER, vice president of the Gulf Oil Corporation, flew from Pittsburgh, Pa., to Port Arthur, Tex., in his private plane last week on business. He returned to Pittsburgh after a few days at the company's largest refinery.

WALTER P. ACHNING and JACK RAYZOR are in charge of the new San Antonio offices of the Solo Oil Company. Mr. Achning was formerly with the Shell Petroleum Company as geologist, and Mr. Rayzor was associated with the Shasta Oil Company.

H. C. VANDERPOOL, formerly field and resident geologist for the Champlin Refining Company, Enid, Okla., has been named chief geologist of the Barnett Petroleum Corporation, Dallas, Tex. He succeeds JOSEPH A. KORNFELD, who has become oil editor of the Wichita (Kans.) Beacon.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

A British concern known as the Kansas-Oklahoma Oil & Refining Company, Ltd., capitalized at 430,000 pounds, has entered the Oklahoma field in Nowata, Washington and Okmulgee counties, having acquired 10,100 acres of productive leases, and will build a 50-mile pipe line to Coffeyville, Kans.

Notwithstanding the Uncle Sam Oil Company threatened to "deprive President Taft of 2,500,000 votes" if he disapproved that company's lease in the Osage Indian Nation, the president turned it down.

Refiners are worried over the piling up of kerosene stocks. The constantly increasing demand for naphthas has made kerosene a drug on the market.

20 YEARS AGO

United States Geological Survey has discovered three good looking structures in Townships 3n-7e and 3n-8e, in Pontotoc County, Oklahoma.

A. C. Bedford, president of the Standard Oil Company (New Jersey), is made chairman of the Oil Committee of the Council of National Defense.

Mrs. Frank Bovard, wife of an American driller, writing from the Burma oil fields, extolls the climate and living conditions there. American drillers do no manual labor and each has a dozen coolies to assist in drilling a well, she says.

10 YEARS AGO

The Oklahoma Corporation Commission approves the plan of curtailment and proration in the Seminole area, and production there drops about 25,000 barrels per day the first week thereafter.

There were 10 Trinity-sand wells producing oil in the Pine Island field in Caddo Parish, Louisiana. Two recent wells started at 12,000 barrels and 4,500 barrels a day respectively.

Twenty representative petroleum stocks on the New York Stock Exchange average $59.99 per share on the market.

C. L. RICKERSON, secretary of the Sloan & Zook Company, Bradford, Pa., and MRS. RICKERSON, are on a five-week tour, embracing Yellowstone National Park and the Canadian Rockies.

JOHN M. LOVEJOY, president of Seaboard Oil Company, Amiranian Oil Company and Inland Exploration Company, sailed from New York with his family on a month's vacation in Europe.

F. C. LAURIE, general manager of the Lago Petroleum Corporation in Venezuela, is in New York on a combination business and vacation trip. He will return to headquarters at Maracaibo in about a month.

R. C. BOWLES, Houston, Tex., geologist and land man with the Standard Oil Company of Kansas, is spending a month's vacation in the Canal Zone. He will return to Houston by way of New Orleans in mid-August.

WALTER HOLMES and FRITZ SEIBOLD, independent operators in the Texas Panhandle, are on an extended vacation in Alaska, hunting and fishing during their stay there, which will be till about September 25.

H. S. JONES, independent oil operator and aviator of Fort Worth, Tex., will be navigator for JIMMIE MATTERN on the latter's flight from San Diego, Calif., to Moscow, U.S.S.R. Mr. Mattern was until recently a flying representative for the Pure Oil Company.

W. L. BAGBY, for several years superintendent of drilling and production activities for the Shell Oil Company in the Ventura division, California, has been appointed manager of the coastal division, which includes holdings of the company in the Ventura, Capitan and Santa Maria areas.

PARAGRAPHS

G. P. HARDISON, member of the geological staff of the Shell Petroleum Corporation, Kansas division, has been transferred to the Illinois-Indiana division.

W. H. HOLLAND, superintendent for the Ohio Oil Company in Wyoming, presided at a meeting in Casper at which 208 veteran employes recently were presented with gold emblems. The Casper and Big Muddy group were entertained at a banquet. JOHN McFAYDEN, vice president, headed the list with 43 years of continuous service with the company. He is affectionately known as "Uncle Jack."

E. E. MAGILL, assistant division chief clerk for the Humble Oil & Refining Company's Gulf Coast division in Houston, has been promoted to division chief clerk of the same division. He replaces H. ORMSTON, who has been promoted to assistant chief clerk of the production operating department in Houston. Mr. Magill's position will be filled by C. E. CAPERS of the Roanoke district, who becomes assistant division chief clerk.

D. F. McMAHON, independent oil producer, who has been ill in his home in Tulsa, was reported this week as convalescent.

S. A. HARTWELL, JR., assistant secretary of the Pennsylvania Grade Crude Oil Association, Oil City, Pa., has returned to his desk after two weeks in Canada.

WALTER S. OLSON, geologist for the Texas Company, is working on seismograph interpretation in the San Joaquin Valley of California. He returned from Colombia last April.

MAYOR S. DAVIS WILSON, of Philadelphia, Pa., a candidate for governor of Pennsylvania, opened his campaign by advocating a plan of taxing fuel oils which compete with anthracite coal 2 cents per gallon.

GEORGE CARR, supervisor of the geophysical department, Shell Petroleum Corporation, Houston, Tex., has resigned to become associated with the General Geophysical Company, Houston. He assumed his new post this week.

R. H. MORRISON, vice president of the Bahrein Petroleum Company, is back at his desk in the Chrysler Building, New York, after a trip abroad which began last November 20. A great deal of the time was spent at Bahrein Island, and one of the trophies of his journey is a shiek's costume.

L. R. McFARLAND has been transferred to Shreveport, La., as chief geologist of that district for the Magnolia Petroleum Company from his former geological post in Decatur, Ill. PAUL NASH, formerly chief geologist in the Shreveport district, has been transferred to Dallas, Tex., in charge of Magnolia's geophysical department.

W. S. ARTHURS, chief scout for the Skelly Oil Company, is recovering from an attack of illness at his home in Tulsa.

C. G. CARLSON, consulting geologist, Tulsa, is on a business trip to Michigan. While in that state he will visit relatives in Ishpeming.

JAMES McCUTCHEON, formerly in the accounting department of the Tide Water Associated Oil Company; JAMES ERRINGTON and GUY RUMBAUGH, young engineering graduates of the University of Tulsa; DANIEL KLINE, formerly with the Pure Oil Company, and M. E. WRIGHT, a combination welder, left Tulsa last week for Lake Maracaibo, Venezuela, sent by the Carter Oil Company. They will work for the Lago Petroleum Corporation and Standard Oil Company of Venezuela.

T. G. ROACH, district superintendent for the Humble Oil & Refining Company at Tomball, Tex., has been transferred to the Hurdle district in West Texas as district superintendent. G. C. NICKLOW, district superintendent of the Gladewater district of the East Texas division, has been transferred to the Tomball district, replacing Mr. Roach.

GEORGE F. BUSH, in the service of the Mid-Continent Petroleum Corporation, Tulsa, 18 years, has been placed in charge of the personnel department recently established by that organization. E. R. BLAZIER, formerly secretary to F. B. KOONTZ, vice president in charge of refining, will be Mr. Bush's assistant in the new department. Mr. Bush has been head of the refinery's employment department in West Tulsa since 1925. M. S. WOOD, who was his assistant, succeeds him.

Goes Higher in Empire

C. S. Warren, recently made general superintendent of production for the Empire Oil and Refining Company, entered that organization in 1919 as a junior engineer in the Doherty training school. His experience has included all phases of oil production. Mr. Warren graduated from Alabama University in 1915. Four years later he received his bachelor of science degree from Alabama Polytechnic Institute. In the meantime he had been working as a mining engineer in the coal and iron regions around Birmingham, Ala., and had served as an engineer in the army.

C. S. WARREN

Soon after joining the Empire the young man became a lease foreman. About the time of the Tonkawa boom and discovery of the deep sand in the Garber pool he was made a district suuperintendent in charge of production at Ponca City, Okla. In 1925 he was transferred to Bartlesville, Okla., with the title of assistant general superintendent of production. Opening of the great oil and gas fields of the Texas Panhandle sent him to that area the next year. He was assigned to New Mexico in 1928 and was made superintendent of the Kansas district in 1930, with headquarters in Eldorado. He became a leader in civic work of that city. When J. E. Howell resigned as general superintendent a few weeks ago to become vice president of the Lion Oil Refining Company, Mr. Warren was promoted to fill the vacancy. He is married, resides in Bartlesville and likes fishing and golf.

J. D. McCAMEY, Tulsa, safety director for the Carter Oil Company, has completed a moving-picture record of the process adopted by the company of welding casing as it is run into the well.

EDWIN B. DABNEY, Oklahoma City, Okla., former attorney general of Oklahoma and later proration attorney, is recovering from an illness which confined him to his home for several months.

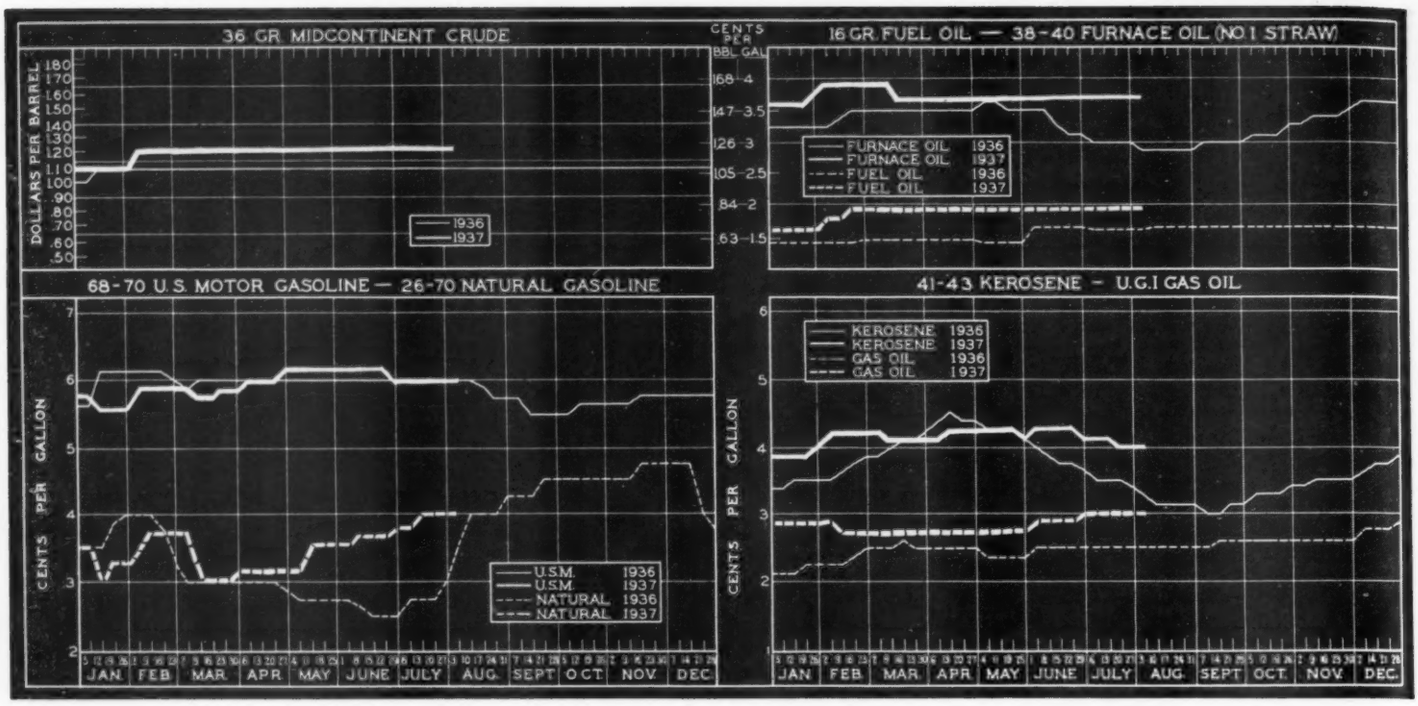
GEORGE H. MURRAY, formerly chief division exploitation engineer for the Shell Petroleum Corporation in Houston, Tex., is on a special assignment at Bakersfield, Calif., for the Shell Oil Company.

LEE E. ADAMS, scout for the Sinclair Prairie Oil Company in the Oklahoma City, Okla., field, and a captain in the army reserve corps, has been appointed a colonel on the staff of GOVERNOR E. W. MARLAND.

T. R. CHENNAULT, assistant district chief clerk in the Anahuac district of Texas for the Humble Oil & Refining Company, has been promoted and transferred to the Tomball district as district chief clerk.

E. P. DONAHUE, formerly superintendent of the General Petroleum Corporation's Tonner absorption plant in Brea Canyon of California, has been made superintendent of the company's new plant in Wilmington, Calif.

PAUL L. McGEE, district petroleum engineer for the Humble Oil & Refining Company in the Thompson district, Texas, has been transferred to the Amelia district, near Beaumont. He will be replaced by J. W. WINFREY, transferred from the Amelia district.



Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Mildly Improved Gasoline Market in Group 3 Doesn't Raise Any Prices

By T. F. SMILEY

Restoration Monday of this week by the Standard of Indiana of normal tank-wagon prices to consumers on third-grade gasoline, kerosene and tractor fuel at points in North Dakota, South Dakota, Minnesota, Wisconsin and Iowa where subnormal prices prevailed had a mildly tonic effect on the Group 3 motor fuel market, though tankcar prices did not budge. Indiana's action not only indicated a rising demand for these products, but it was regarded as pointing perhaps toward general reinstatement of tank-wagon prices which were reduced by the company June 9.

Confusion Over Action

Confusion as to the import of Indiana's latest action has appeared because of the fact, apparently forgotten by some, that the company posts two tank-wagon prices. One is the dealer tank-wagon price, given to dealers who sell to the motorist through the service station pump. The other is the consumer tank-wagon price, given to farmers and other consumers who buy in tank-wagon lots, usually fixed at 50 gallons.

In the June reduction the consumer tank-wagon price was cut a half-cent on all grades of gasoline. The dealer tank-wagon price underwent a similar cut, but in addition the price on third-grade material was cut another half-cent, making the total reduction on third-grade a whole cent.

This week's action of the company does not touch the dealer tank-wagon price at all, and it has no effect on service station prices anywhere. It does, however, put the consumer tank-wagon price in certain localities back where it was before the reduction, establishing a spread of 1 cent between the consumer tank-wagon price and the dealer tank-wagon price at these points. One result of this spread is likely to be that some farmers and other large consumers who had been getting gasoline from a jobber or a refinery's bulk plant agent at the consumer tank-wagon price will go to service stations for it, thus imparting at least a little more steadiness to the retail market in these areas.

Although the country's total gasoline stocks are not subsiding fast enough to get them down where they should be at the close of the heavy consuming season, the overlarge inventories assuredly are not in the hands of Mid-Continent independent refiners. Most of this group are sold out. Typical of the situation in which these refiners find themselves is that of one large independent operator who has been running a plant 10 per cent in excess of its rated capacity for the last 30 days and has had it on stream for 98 days. Like others in similar case, this refiner is turning down gasoline orders daily and is worried about the outlook.

Natural Gasoline Quiet

The natural gasoline market continued quiet, with supply so nearly in gear with demand that quotations showed no disposition to move from the spot where they have been standing since mid-July. Inquiries for fall blending were drifting in, but not many were being translated into orders. The middle of August should see buying for fall and winter motor fuel starting in substantial volume, with corresponding stiffening in prices. Prevailing conditions were described as healthy. Stocks in the hands of manufacturers were said for the most part to be sold. Following cargo business already reported, another cargo order was booked last Saturday, pointing to continued absence of topheavy inventories in either Oklahoma or Texas.

Both bright stocks and neutrals were draggy, but prices were holding. Furnace oils were maintaining their firmness, with refiners in no hurry to sell at current prices. A strong market for this group of products seems assured. Inquiries were arriving in increasing numbers. Wax was extremely strong, with all refineries in the Mid-Continent territory apparently sold up.

Refined Oil Market Barometer

Gasoline demand vigorous, with higher wholesale and retail quotations in some areas. Interior regions still suffering from unsettled tank-wagon price structure. Heating oils gaining strength as jobbers continue efforts to buy for storage at current price levels. Refiners disinclined to sell. Natural gasoline supply and demand well balanced. Mid-August expected to see upturn.

MID-CONTINENT. Gasoline firm, with many stocks low. Heating oils strong. Naturals quiet.

EAST COAST. Gasoline up in some areas, with consumption high. Heating oils firm.

GULF COAST. Market generally strong, with few products available for spot market.

CALIFORNIA. Gasoline steady. Kerosene distillate firm. Fuel, diesel and gas oils strong.

PENNSYLVANIA. Gasoline strong. Lubricants firmer. Wax strong. Fuels and kerosene firm.

CHICAGO. Tankcar gasoline tight, with third-grade material especially strong. Kerosene fair.

Motor Fuel Prices Go Higher in East as Marketers Start Final Drive

By H. STANLEY NORMAN

NEW YORK, Aug. 3. — Gasoline prices again pushed into higher ground last week as marketers made ready for the final drive for summer motor fuel sales. There was no general advance in the basic motor fuel market, but Buffalo and Rochester prices in up-state New York were raised a half cent per gallon and the range of open-market trading in New York harbor was narrowed by boosting the lower bracket.

Socony-Vacuum Oil Co., Inc., made the half-cent per gallon advance in Buffalo and Rochester on all classes of delivery. The advance was followed by practically all dealers in the two cities. It applied to scores of smaller cities and communities in the trade areas of the two division points.

The only change to lower ground reported last week was by Standard Oil Co. of New Jersey in Washington, D. C. Consumer tankcar, dealer tank-wagon and service station prices in Washington were lowered a half-cent per gallon on July 17. The posted service station price at Washington, one of the few points at which Standard of New Jersey has retained company-operated retail outlets, is now 16 cents per gallon, including taxes.

Brooklyn's retail gasoline market remains unsettled, although somewhat improved over conditions existing three weeks ago. Some marketers continue to offer unbranded gasoline at 6 gallons for 98 cents, including state and federal taxes. So far, however, the low-pressure area has been confined to local spots and the fear that price-cutting might spread to other New York boroughs has not developed. Northern New Jersey service station prices continue below normal for this district, but conditions in Philadelphia have been improved during the past two or three weeks, in that most stations have leveled off their quotations to an equal basis.

Tankcar and barge gasoline markets in New York and Philadelphia have experienced some improvement. Most tankcar gasoline moving in the open market is bringing a minimum of 7¾ cents per gallon while a good percentage of material is turning at 8 cents. Until two weeks ago, the spread was from 7½ to 8 cents. A small amount of motor fuel testing 65 octane is still available at 7½ cents per gallon in New York, but the volume is too small to be considered a real factor in the market. New prices posted by Socony-Vacuum at Rochester are 9.24 cents to tankcar dealers and 10.8 cents per gallon to tank-wagon dealers. At Buffalo the tankcar price is now 9.17 cents and the tank-wagon 10.8 cents.

Although gasoline consumption is holding at its summer record level and is expected to continue for at least 45 days without material diminution, the drive for fall and winter furnace oil business is in full swing. The light fuel oil market has shown little change since early summer, but the fact that it has held firm for 60 days is evidence that basic conditions are sound and that suppliers are not anxious sellers.

Currently contracts with consumers in the vicinity of New York are being written on a spread of 7½ to 8½ cents per gallon for No. 2 furnace oil. There were reports about a month ago that some dealers were shading this range of prices by at least a half cent and in some instances three-quarters of a cent. On the basis of a more active drive for next winter's business which is now under way, it appears that a majority of the large jobbers in New York and surrounding area are firmly established on the range of 7½ to 8½ cents per gallon.

There is no method of determining at this early point in the fuel oil season what may develop before actual deliveries are started to consumers. Last year many of the jobbers passed along a voluntary reduction of a quarter cent to a half cent per gallon below the terms stipulated in the original contracts. Failure of last winter's original contract prices to stand up was attributed to a few jobbers in the New England district who managed to underquote the general market by fractions of a cent. In order to protect dealers of long standing against loss of business major suppliers lowered their tankcar and barge quotations accordingly. Activity of suppliers in the open and contract furnace oil market during the summer in buying or agreeing to absorb stocks of smaller refining units may remove the source for some dealers who cut the market last winter. Large refiners have been more willing buyers of furnace oil this summer due to the large increase of burner sales, which give indication of boosting light fuel demand substantially this winter.

The Gulf Coast cargo market, both for coastwise and export trade, showed little change last week. Prices remained firm and in one or two instances the trend was to higher ground.

Sporadic clashes in northern China between Japanese and Chinese troops, which threaten to break into a major conflict, apparently will have some bearing on the Gulf Coast export market. Three tankers were reported under charter last week for loading Gulf Coast cargoes for China. Japan is also active in the United States export market, but so far preparations to augment its petroleum supplies have been confined to Pacific Coast suppliers.

A French tanker was reported chartered last week for two voyages from the United States Gulf Coast to southern Spain, but no details were available on whether cargoes had been purchased to load the vessel.

Gas oil, one of the season's most active export products on the Gulf Coast, was reported firm in price last week, but that no business has developed recently. Most suppliers are quoting 4¼ cents per gallon with a few holding slightly higher ideas and still another group said to be willing to do business at 4⅛ cents per gallon. There is relatively little gas oil of export quality in the hands of Gulf Coast refiners. Much of their current production of gas oil is absorbed readily by contract buyers both in this country and abroad. Shipments of gas oil continue heavy to England and France, where one of the international companies has directed considerable of the material exported this year.

Kerosene remains unchanged in the Gulf Coast and western Pennsylvania refining districts. From 4⅞ to 5 cents per gallon is required to do business in kerosene both on the Gulf Coast and in western Pennsylvania. The tankcar price in New York continues unchanged at 6.3 cents per gallon while the tank-wagon quotation ranges from 9 to 10 cents in most North Atlantic districts. Standard Oil Co. of New Jersey advanced kerosene a half cent per gallon to 9 cents on July 26 in Atlantic City, N. J. Gasoline prices in western Pennsylvania were firm last week and some refiners were inclined to elevate quotations on higher octane motor fuel. Refiners were quoting from 7½ to 8 cents per gallon on 65 octane motor fuel in

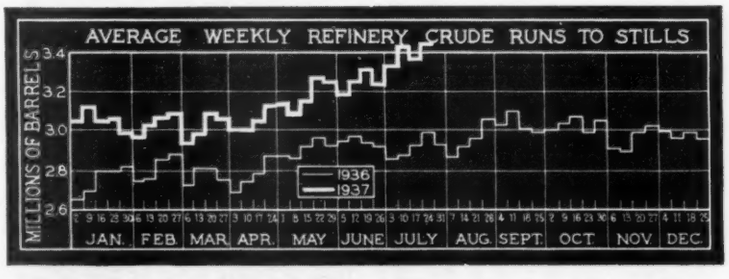
(Continued on Page 106)

A. P. I. Weekly Refinery Statistics

Week Ending July 31, 1937

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	584,000	18,116,000	11,394,000
Appalachian	88.4	111,000	2,835,000	870,000
Indiana, Illinois, Kentucky	92.4	461,000	11,847,000	6,564,000
Oklahoma, Kansas, Missouri	84.6	315,000	7,067,000	3,323,000
Inland Texas	56.6	129,000	2,034,000	1,624,000
Texas Gulf	95.5	747,000	8,889,000	8,985,000
Louisiana Gulf	96.3	149,000	1,792,000	2,570,000
North Louisiana and Arkansas	63.7	38,000	473,000	414,000
Rocky Mountains	69.7	59,000	1,530,000	790,000
California	90.9	543,000	12,459,000	68,955,000
Total reported	88.9	3,136,000	67,042,000	105,489,000
Estimated unreported	.....	289,000	3,830,000	2,720,000
*Estimated total	.....	3,425,000	70,872,000	108,209,000
*Estimated total previous week	.....	3,380,000	72,020,000	106,260,000
*August 1, 1936	.....	2,910,000	64,827,000	108,856,000

*Bureau of Mines, currently estimated.



Stocks of Crude Oil in the United States

(BUREAU OF MINES ESTIMATES)

Week ending July 17, 1937	307,139,000 barrels
Week ending July 10, 1937	307,255,000 barrels
Week ending July 18, 1936	308,501,000 barrels

RETAIL OIL MARKETS

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of August 3, 1937

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Standard Oil Co. (Indiana)

	Gasoline Tank wag.	Gasoline Dlr.	Gasoline Inc. tax	Kero. tank wag.
Chicago, Ill.	15.5	13.5	4.0	10.1
Decatur	15.5	14.0	4.0	10.1
Joliet	15.5	14.0	4.0	10.1
Peoria	15.5	14.0	4.0	10.1
Quincy	15.3	13.8	4.0	7.6
Davenport, Ia.	15.5	14.0	4.0	‡13.1
Des Moines	15.3	13.8	4.0	‡12.9
Mason City	15.7	14.2	4.0	‡13.3
Sioux City	15.5	14.0	4.0	‡13.1
Duluth, Minn.	17.3	15.8	5.0	10.9
Mankato	16.9	15.4	5.0	10.5
Twin Cities	16.9	15.4	5.0	10.5
Lacrosse, Wis.	16.9	15.4	5.0	10.5
Green Bay	17.2	15.7	5.0	8.6
Milwaukee	16.8	15.3	5.0	10.4
Detroit, Mich.	15.4	13.9	4.0	9.8
Grand Rapids	16.5	15.0	4.0	10.9
Saginaw	16.3	14.8	4.0	8.5
Evansville, Ind.	17.0	15.5	5.0	†10.6
Indianapolis	17.2	15.7	5.0	†9.6
South Bend	17.4	15.9	5.0	†9.6
Fargo, N. Dak.	16.9	15.4	4.0	11.5
Minot	18.1	16.6	4.0	12.7
Huron, S. Dak.	17.3	15.8	5.0	10.9
Kans. City, Mo.*	14.9	13.4	4.0	8.0
St. Louis*	15.2	13.7	4.0	9.8
St. Joseph*	14.9	11.4	4.0	6.9
Wichita, Kans.	14.4	12.9	4.0	7.5

*State tax 2 cents, 1-cent city tax and 1-cent federal tax. †Does not include 4-cent state tax. ‡Iowa kerosene prices include 3-cent state tax.

(Exclusive of state general sales taxes, except Indiana and South Dakota.)

Discounts to commercial consumers: On purchases per month off tank-wagon prices: 1,000 gallons or more, 1.5 cents off; minimum delivery 25 gallons.

Stanolex Fuel Oil in Chicago

Effective Dec. 7, 1936, f.o.b. Chicago tank-wagon prices: Range oil, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.3 cents. Stanolex No. 1, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.0 cents. Stanolex furnace oil, 1-149 gallons, 7.8 cents; 150 gallons and over, 7.0 cents. Stanolex A, 1-399 gallons, 5.75 cents; 400 gallons and over, 4.75 cents. Stanolex B, 1-799 gallons, 5.75 cents; 800 gallons and over, 4.75 cents.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline Tank wag. dlr.	Gasoline Tank car con'r.	Gasoline Inc. tax	Kero. tank wag.
Atl'tic City, N. J.	13.5	12.0	4.0	9.0
Newark	13.5	12.0	4.0	9.0
Annapolis, Md.	15.6	14.1	5.0	9.5
Baltimore	15.0	13.5	5.0	9.0
Cumberland	17.4	14.9	5.0	10.0
Wash'g'n, D. C.*	12.5	11.0	3.0	9.5
Danville, Va.	18.2	15.7	6.0	12.9
Norfolk	17.0	14.5	6.0	11.5
Petersburg	17.3	14.8	6.0	11.7
Richmond	17.3	14.8	6.0	11.7
Roanoke	18.5	16.0	6.0	12.9
Charles'n, W. V.	17.8	15.3	6.0	12.6
Parkersburg	17.1	14.6	6.0	11.2
Wheeling	17.0	15.5	6.0	12.2
Charlotte, N. C.	19.4	16.9	7.0	12.6
Hickory	19.9	17.4	7.0	13.0
Mt. Airy	19.7	17.2	7.0	12.8
Raleigh	19.0	16.5	7.0	12.1
Salisbury	19.5	17.0	7.0	12.7
Charleston, S. C.	18.0	15.5	7.0	11.1
Columbia	19.0	16.5	7.0	12.1
Spartanburg	19.7	17.2	7.0	12.9

*Standard of N. J. has discontinued posting service-station prices at all above points except at Washington and Baltimore where station prices of 16.0 and 18.5 cents, respectively, are in effect.

Price basis to commercial consumers, effective March 8, 1937, in Maryland, District of Columbia, and in Arlington and Fairfax counties in Virginia; and March 12 in New Jersey: To contract accounts purchasing at least one full compartment at time by hose connection, on yearly purchases: From 2,500 to 100,000 gallons, consumer tank-wagon price at time and place of delivery; 100,000 gallons per year, consumer tankcar price plus .5 cent per gallon. Consumer tank-wagon price generally will be equivalent to dealer tank-wagon price less .5 cent per gallon.

Effective May 15, 1937, in North and South Carolina, West Virginia and Virginia (except Arlington and Fairfax counties): Commercial consumers taking deliveries of 50 gallons (W. Va., 100 gallons) or more at one time will be billed at posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons (W. Va., 100 gallons) will be billed at 4 cents per gallon over posted consumer tank-wagon price. Generally the posted consumer tank-wagon price will be equivalent to the dealer price less .5 cent per gallon.

Discount for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except no discount in New Jersey.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline Tank wag.	Gasoline Net dlr.	Gasoline Inc. tax	Kero. tank wag.
Atlanta, Ga.	22.0	19.0	7.0	*13.0
Augusta	21.0	18.0	7.0	*14.0
Macon	21.5	18.5	7.0	*14.5
Savannah	19.0	16.0	7.0	*12.0
Birm'ham, Ala.	19.5	16.5	8.0	12.0
Mobile	22.0	19.0	9.0	11.0
Montgomery	22.0	19.0	9.0	14.5
Jackson, Miss.	21.0	18.0	7.0	*13.0
Vicksburg	20.5	17.5	7.0	*13.0
Jacksonville, Fla.	20.5	17.5	8.0	11.0
Miami	20.5	17.5	8.0	†11.5
Pensacola	22.0	19.0	9.0	12.0
Tampa	19.0	16.0	8.0	10.5
Lexington, Ky.	20.0	17.0	6.0	11.0
Covington	19.5	16.5	6.0	11.0
Louisville	20.0	17.0	6.0	10.5
Paducah	20.0	17.0	6.0	8.0

Price basis to tank-wagon consumers: Effective January 4, 1937, 3 cents per gallon below tank-wagon price. Kerosene prices in all states subject to 2 cents discount except in Kentucky where prices are net.

*Includes 1-cent state tax. †Subject to 2-cent discount.

Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax; and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon; Pensacola has a city gasoline tax of 1 cent.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline Dealer	Gasoline Inc. tax	Kero. tank wag.
Denver, Colo.	17.5	5.0	11.5
Grand Junction	20.0	5.0	15.0
Pueblo	16.0	5.0	10.5
Casper, Wyo.	18.0	5.0	11.5
Cheyenne	18.0	5.0	13.0
Butte, Mont.	19.5	6.0	15.5
Billings	20.0	6.0	15.5
Helena	21.5	6.0	15.5
Great Falls	21.5	6.0	15.5
Salt Lake, Utah	19.5	5.0	16.0
Twin Falls, Ida.	21.5	6.0	18.0
Boise	21.5	6.0	18.0
Albuquerque, N. M.	17.5	6.5	12.0

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline Tank wag.	Gasoline Di-vided con'r.	Gasoline Inc. tax	Kero. tank wag.
Ohio points	17.0	16.0	5.0	*13.5

*Includes state tax of 1 cent.

Divided dealer price is also price to authorized agents, exclusive of .5 cent rental. Tank-wagon price is price to commercial consumers in deliveries of 25 gallons or more; less than 25 gallons gets service-station price.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline Tank wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank wag.
San Francisco	17.5	18.5	4.0	11.5
Los Angeles	17.0	18.0	4.0	9.0
Fresno, Calif.	18.5	19.5	4.0	12.0
Phoenix, Ariz.	21.0	22.0	6.0	‡16.0
Reno, Nev.	20.0	21.0	5.0	13.0
Portland, Ore.	20.0	21.0	6.0	13.5
Seattle, Wash.	20.0	21.0	6.0	13.5
Spokane	23.0	24.0	6.0	16.5
Tacoma	20.0	21.0	6.0	13.5

‡Includes 5-cent state tax.

Discounts to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents; to split dealers, 2 cents. To commercial consumers: on tank-wagon price: on single deliveries of 40 gallons and over, advance quantity discount extended at time of delivery, 3 cents. Service station schedule applies on single deliveries less than 40 gallons. On kerosene in tankcar, transport truck and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank-wagon.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline Tank wag. dlr.	Gasoline Tank car con'r.	Gasoline Inc. tax	Kero. tank wag.
Albany, N. Y.	15.0	13.5	5.0	9.0
*Met. N. Y.:				
Manh't'n, Br'nx	15.0	13.5	5.0	9.0
Staten Island	15.0	13.5	5.0	9.0
Q'ns & Brklyn	15.0	13.5	5.0	9.0
Buffalo	15.3	13.67	5.0	8.5
Rochester	15.3	13.74	5.0	8.5
Syracuse	15.3	13.7	5.0	9.0
Boston, Mass.	12.8	12.5	5.0	8.5
Portland, Me.	15.8	13.5	5.0	8.75
Manch'ter, N. H.	16.3	14.0	5.0	9.5
Burlington, Vt.	15.9	13.9	5.0	9.75

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Price basis to undivided dealer: Posted dealer tank-wagon price less .5 cent. Price basis to commercial consumer: Effective Nov. 15, 1936, monthly purchases of 25,000 gallons and over, consumer tankcar prices at delivery point plus .5 cent per gallon; monthly purchases of 5,000 to 25,000 gallons, undivided dealer price at delivery point: Monthly purchases under 5,000 gallons, pay divided dealer tank-wagon price at delivery point.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline Tank wag.	Gasoline Dlr.	Gasoline Inc. tax	Kero. tank wag.
Omaha	17.9	16.4	6.0	10.4
McCook	18.0	17.1	6.0	10.0
Norfolk	18.3	16.8	6.0	10.8
North Platte	18.7	17.2	6.0	11.2
Scotts Bluff	19.4	17.9	6.0	10.9

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective Jan. 1, 1935.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline Dealer	Gasoline Inc. tax	Kero. tank wag.
Muskogee, Ok.	15.0	5.0	7.0
Oklahoma City	14.0	5.0	8.0
Tulsa	14.0	5.0	7.0
Ft. Smith, Ark.	15.5	5.0	10.0
Little Rock	18.0	7.5	9.5
Texarkana	15.5	5.0	9.0

Texas

	Gasoline Tank wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank wag.
Dallas, Tex.	14.0	18.0	5.0	8.0
Fort Worth	14.0	18.0	5.0	8.0
Houston	14.5	18.5	5.0	8.0
San Antonio	14.5	18.5	5.0	8.0

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline Tank wag. dlr.	Gasoline Tank car con'r.	Gasoline Inc. tax	Kero. tank wag.
N. Orleans, La.	20.5	18.0	*10.0	†13.0
Baton Rouge	18.5	16.0	8.0	12.0
Alexandria	19.0	16.5	8.0	12.0
Lafayette	19.5	17.0	8.0	13.0
Lake Charles	19.5	17.0	8.0	12.5
Shreveport	18.0	15.5	8.0	9.5
Knoxville, Tenn.	21.5	19.0	8.0	14.0
Memphis	19.5	17.0	8.0	12.0
Chattanooga	21.0	18.5	8.0	13.5
Nashville	20.5	18.0	8.0	11.0
Bristol	20.25	19.0	8.0	14.5

*Includes 2-cent parish tax. †Includes 1-cent parish tax and 1-cent state tax.

Standard of La. has transferred all stations to dealers except in New Orleans and Baton Rouge where station prices are 24 and 22 cents per gallon, respectively.

Price basis to commercial consumers: Effective May 15, 1937, deliveries of 50 gallons or more in one delivery takes posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons at one time pay posted consumer tank-wagon price plus 4 cents per gallon. Generally, the posted consumer tank-wagon price will be equivalent to the dealer price less .5 cent per gallon.

Louisiana kerosene prices include 1-cent state tax.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline Tank wag. dlr.	Gasoline Tank car con'r.	Gasoline Inc. tax	Kero. tank wag.
Philadelphia, Pa.	14.5	13.0	5.0	10.5
Pittsburgh	15.5	13.5	5.0	11.0
Allentown	15.0	13.5	5.0	11.0
Erie	14.5	13.0	5.0	10.5
Scranton	15.0	13.5	5.0	11.0
Altoona	15.5	13.5	5.0	11.0
Dover, Del.	14.0	....	5.0	11.0
Wilmington	14.0	....	5.0	11.0
Springf'ld, Mass.	14.8	....	4.0	9.0
Worcester	14.8	....	4.0	9.0
Hartford, Conn.	14.6	....	4.0	9.0
New Haven	14.0	....	4.0	9.0
Providence, R. I.	14.0	....	3.0	8.5

Price basis to undivided dealers, dealer tank-wagon price less .5 cent per gallon. Price basis to commercial consumers in Pennsylvania and Delaware, effective March 11, 1937: Consumers under contract using 100,000 gallons or more per year full compartment hose deliveries, tankcar plus .5 cent. Consumers under contract using less than 100,000 gallons per year compartment hose deliveries, undivided dealer price. Consumers under contract less than full compartment delivery, consumers not under contract less than full compartment delivery, and consumers not under contract full compartment delivery, divided dealer price. Less than 25 gallons, tank-wagon delivery, 4 cents per gallon above undivided dealer price.

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank-wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b Chicago. Each price subject to discount of 1 cent per gallon for 150 gallon lots if covered by contract.

Canada*

3 Star Imperial Gasoline
IMPERIAL OIL, LTD.

	Tank-wag.	Inc. tax	Kero. tank wag.
Halifax, N.S.	24.0	8.0	18.5
St. John, N.B.	24.0	8.0	18.5
Montreal, Que.	21.0	6.0	17.5
Toronto, Ont.	22.0	6.0	17.0
Hamilton, Ont.	22.0	6.0	17.0
Winnipeg, Man.	28.2	7.0	20.7
Brandon, Man.	29.8	7.0	22.3
Regina, Sask.	29.5	7.0	22.0
Saskatoon, Sask.	32.3	7.0	24.8
Edmonton, Alta.	30.5	7.0	24.2
Calgary, Alta.	28.0	7.0	21.5
Vancouver, B.C.	23.0	7.0	23.0

*Imperial gallon used in Canada.

Divided dealers pay tank-wagon price. Discount to undivided dealers, 1 cent below tank-wagon price. In maritime provinces both divided and undivided dealers pay tank-wagon price.

Retail Price Changes

Standard Oil Co. (Indiana) July 30 reduced tank-wagon kerosene .9 cent in Kansas City.

Standard Oil Co. of New Jersey July 17 reduced dealer and station gasoline .5 cent in Washington; July 26 increased tank-wagon kerosene .5 cent in Atlantic City and Newark.

Continental Oil Co. July 16 advanced dealer gasoline .5 cent in Texarkana; July 22 advanced dealer gasoline 2 cents in Fort Smith.

Midwest Prices Advanced

Effective August 2, Standard Oil Co. (Indiana) restored to the normal basis tank-wagon prices to consumers on third-grade gasoline, kerosene and tractor fuel at points in North Dakota, South Dakota, Minnesota, Iowa and Wisconsin, where subnormal prices were in effect, with a few exceptions. There was no change in the existing prices to dealers on third-grade or house-brand gasoline.

PRICES OF REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of August 3, 1937

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 oct. and below (3d gr.)	.05	.05¼
63-67 octane	.05⅜	.05⅝
68-70 octane (regular)	.06	.06¼
60-62 400 grades:		
62 oct. and below (3d gr.)	.05	.05¼
63-67 octane	.05⅜	.05⅝
68-70 octane (regular)	.06	.06¼
64-66 375	.05¼	.05⅜
68-70 360	.05¼	.05⅜

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below	.05	.05¼
63-67 octane	.05⅜	.05⅝
68-70 octane (regular)	.06	.06¼
60-62 400	.05	.05¼
64-66 375	.05¼	.05¼

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U. S. Motor grades:		
62 octane and below		.05½
63-67 octane	.05¾	.06
68-70 octane (regular)		.06½

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:		
62 octane and below		.05½
63-67 octane	.06	.06½
68-70 octane (regular)		.06½

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.05	.05¼
63-67 octane	.05⅜	.05⅝
68-70 octane (regular)	.06	.06¼
60-62 400 grades:		
62 octane and below	.05	.05¼
63-67 octane	.05⅜	.05⅝
68-70 octane (regular)	.06	.06¼
64-66 375	.05	.05¼
68-70 360	.05⅛	.05⅜

PENNSYLVANIA (Inland refineries)—

58-60 U. S. Motor:		
Below 60 octane	.06	.06¼
60-64.9 octane	.07⅜	.07⅝
65-70 octane	.07½	.07¾
64-66 375		.06⅛
68-70 350		.06¼

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.07½	.08½
58-60 400, 65 oct. and higher	.08¼	.09¼

EAST COAST (domestic)—

U. S. Motor below 60 octane:		
*New York (Bayonne)		.07¼
Baltimore		.07¼
U. S. Motor, 60-64.9 octane:		
*New York (Bayonne)	.07½	.07¾
Philadelphia	.07½	.07¾
Boston		.07¾
Baltimore	.07½	.07¾
Charleston, S. C.		.07¾
U. S. Motor, 65 and above:		
*New York (Bayonne)	.08	.08½
Philadelphia	.07¾	.08¼
Boston	.08	.08½
Baltimore		.08
Charleston, S. C.		.08

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.06	.06⅛
60-64.9	.06½	.06⅝
65 octane and higher		.06½

Naphtha

PENNSYLVANIA (Inland refineries)—

50-52 450 (blending)	.05⅞	.06
52-54 450 (blending)	.05⅞	.06
54-56 450 (blending)	.06	.06⅛

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.04
Grade 18-55	.04¾	.04⅞

NORTH TEXAS—

Grade 26-70		.04⅛
Grade 18-55	.04⅞	.05

CALIFORNIA—

75-85 375-390	.06¾	.07½

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

Grade 26-70	.04	.04⅛

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 l.b.p., 110 flash, 540-550 e.p.	.04	.04¼
41-43 gr., 300-350 l.b.p., 110-125 flash, 500-520 e.p.	.04⅝	.04⅝
46-48 gr., 210-230 l.b.p., 480 max. e.p.	.04¾	.04⅞

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.04	.04¼
42-44	.04¼	.04½

NORTH TEXAS—

41-43	.04	.04¼

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43		.04⅝

ARKANSAS (Ark., N. La., Miss. del.)—

41-43		.04¾

PENNSYLVANIA (Inland refineries)—

45		.05
46		.05⅛
47		.05¼

CHICAGO (Based on Group 3)—

41-43	.04⅛	.04⅜
42-44	.04⅜	.04½

CALIFORNIA (Pac. Coast market)—

38-43 high burning test	.04¼	.05½

NEW YORK (Bayonne, N. J.)—

41-43	.05½	.05¾

***GULF COAST (domestic)—**

41-43	.04⅞	.05

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.03⅞	.04
No. 1 straw, 38-40	.03⅝	.03¾
No. 2 straw, 32-36	.03½	.03⅝
No. 2 dark, 32-36	.03¼	.03½
No. 3, zero to 15, 28-32	.03⅛	.03⅜
No. 3, 15 and above, 28-32	.02⅝	.02¾

NORTH TEXAS—

No. 1 prime white, 38-42		.04
No. 1 straw, 38-40	.03⅝	.03¾

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

No. 2, 32-36	.03½	.03⅝

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36		.03⅝

CHICAGO (based on Group 3)—

No. 1 prime white, 38-40	.03⅞	.04
No. 1 straw, 38-40	.03⅝	.03¾
No. 2 straw, 32-36	.03½	.03⅝
No. 2 dark, 32-36	.03¼	.03⅜
No. 3, zero to 15, 28-32	.03⅛	.03¼
No. 3, 15 and above, 28-32	.02⅝	.02¾

NEW YORK (Bayonne, N. J.)—

*No. 1		.05¾
*No. 2	.05⅝	.05⅞
*No. 4	.05⅛	.05⅝

*Barge deliveries one-eighth to one-fourth cent under above, tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal.; fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.03	.03⅛
No. 4, low cold test, 24-28	1.05	1.12½
No. 4, 15 and above, 24-28	.90	.95
No. 5, low cold test, 18-22	.85	.90
Below 18 fuel oil, industrial	.80	.85

NORTH TEXAS—

U.G.I. gas oil	.03	.03⅛
No. 4, low cold test, 24-28	1.05	1.12½
No. 5, low cold test, 18-22	.85	.90
Below 18 fuel oil, industrial	.80	.85

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

10-14 fuel oil, industrial	.80	.85

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.03	.03⅛
No. 4, low cold test, 24-28	1.05	1.12½
No. 4, 15 and above, 24-28	.90	.95
No. 5, low cold test, 18-22	.85	.90
No. 6, low cold test, 10-16	.80	.85

PENNSYLVANIA (Inland refineries)—

36-40	.04⅜	.04½

CALIFORNIA—

Los Angeles:		
30-34 gas oil, per bbl.	1.15	1.35
24 plus diesel, per bbl.	1.17	1.35
24 plus diesel (bunkers)	1.50	1.65
12-16 (bunkers at tidewater)	1.05	1.20
10-16 (cargo lots)	.95	1.10
12-17 (tankcars)	1.00	1.15
10-17 (high sulfur)	.60	.90
San Joaquin Valley:		
10-18 (tankcars)	.80	1.00
24 plus diesel, per bbl.	1.45	1.65
San Francisco:		
27 plus diesel		1.65
24 plus diesel (bunkers)		1.70
10-16 (bunkers)		1.15

GULF COAST—

28-30 gas oil	.04⅛	.04¼
28-30 diesel (bunkers)		1.90
Bunkers (bulk cargoes)		.95
Bunker C (bunkers)		1.05

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.04¾
28-30 diesel (lighterage 6¼c per bbl.)		2.20
28-30 diesel (tankcars)		.05
Bunker C (to ocean-going ships in N. Y. harbor)	1.35	1.50
Industrial fuel (tankcars)		.04½

Lighterage charge 5c bbl. additional.

Bright and Steam Refined

OKLAHOMA (Group 3)—

Bright Stocks:	
190-200 D, 15-25	.22
150-160 D, 0-10	.19
150-160 D, 15-25	.18½
150-160 E, 15-25	.18
100-110 D, 0-10	.17
Steam refined:	
631 green (treated)	.16
600 dark green (untreated)	.05

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 145-50 at 210, 540-550 flash):		
10 pour test	.24	.24½
15 pour test	.23	.23½
20 pour test	.22	.22½
25 pour test	.21	.21½
Steam refined:		
600	.14	.14½
650	.16½	.17
600 Pennsylvania flash	.17½	.18
630 flash	.21½	.22
600 Warren E filtered	.17½	.18

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:	
150-3	.09
180-3	.10
180-4	.09½
200-3	.10½
200-4	.10
250-3	.11½
250-4	.11
280-3	.12½
280-4	.12
300-3½	.13
400-3½	.14
100-2½ paraffin oil	.06
15-20 Cold Test:	
200-3	.10
200-4	.09½
250-3	.11
250-4	.10½
280-3	.12
280-4	.11½

GULF COAST—

Pale Oils:		
200-3	.07	.07¼
300-3	.07½	.07¾
500-3½	.08½	.08¾
750-3½	.08⅝	.09¼
1,200-3½	.09½	.09¾
1,500-4	.09¾	.10
Red Oils:		
200-5-6	.07¼	.07½
300-5-6	.07¼	.07½
500-5-6	.08	.08½
750	.08¾	.09
1,200-5-6	.09¼	.09½

CALIFORNIA (moving to dom. market)

Pale Oils:		
100-2½-3	.07	.08
200-2½-3	.07	.08
300-2½-3	.07	.08
400-3-4	.09	.11
540-3-4	.09	.11
550-3-4	.09	.11
600-3-4	.09	.11
Red Oils:		
200-4-5	.07	.08
300-5-6	.07	.08
350-5-6	.10½	.11½
400-5-6	.10½	.11½
450-5-6	.10½	.11½
500-5-6	.10½	.11½
600-5-6½	.10½	.11½
700-6½ plus	.10½	.11½
750-6½ plus	.10½	.11½
900-6½ plus	.10½	.11½

PENNSYLVANIA—

150 vis. at 750° F. color, 400-405 flash:		
Zero pour test	.22½	.23
10 pour test	.21½	.22
15 pour test	.21	.21½
25 pour test	.20	.20½
180 vis. at 70° F., 3 color:		
25 pour test	.23	.23½
200 vis. at 70° F., 3 color:		
Zero pour test	.27	.27½
10 pour test	.26	.26½
15 pour test	.25½	.26
25 pour test	.24½	.25

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale		.03

PENNSYLVANIA (Inland refinery)—

122-124 (a.m.p.) w.c. scale	.0295	.0300
124-126 (a.m.p.) w.c. scale	.0300	.0305

NEW YORK—

Wax in bags fully refined:		
122-125 (a.m.p.) wax		.0445
125-127 (a.m.p.) wax		.0455
128-130 (a.m.p.) wax		.0480
130-132 (a.m.p.) wax		.0505
133-135 (a.m.p.) wax		.0535
135-137 (a.m.p.) wax		.0560
124-126 (a.m.p.) w.s.	.0295	.0300
124-126 (a.m.p.) y.s.	.0265	.0280
Petrolatum in barrels, carload lots:		
Dark green		.01⅞
Amber	.02⅞	.03
Extra amber	.03	.03⅛
Lily white	.06⅝	.06¾
Snow white	.07¾	.07⅞
Cream	.05⅝	.05¾

Export Prices

GASOLINE

GULF COAST—

U. S. Motor		.06
60-62 400	.06	.06⅛
61-63 390	.06⅛	.06¼
64-66 375		.06⅜

LOS ANGELES—

U. S. Motor grades:		
53-55 octane		.04¾
55-65 octane	.04¾	.05
65-67 octane		.05
67-69 octane		.05¼
Above 69 octane	.05½	.06

KEROSENE

GULF COAST—

41-43 prime white	.04⅞	.05
41-43 water white		.04⅞
44 water white	.05	.05⅛

LOS ANGELES—

41-43 water white	.04½	.05

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.o.s. in bbls.)—

Cylinder Stocks:		
600 Warren E	.26½	.27
600 S.R. unfiltered	.24	.24½
630 S.R. unfiltered	.25½	.26
600 flash, S.R.	.26½	.27
630 flash, S. R.	.31½	.32
Bright Stocks:		
8 color	.32	.32½
6½ plus color in dilution	.31½	.32

NEUTRAL OIL

200-3 color	.34	.34½
150-3 color	.29½	.30

PARAFFIN WAX

NEW YORK (prices per pound)—

123-126 a.m.p.		.04125
125-127 a.m.p.		.0425
128-130 a.m.p.		.0450
133-135 a.m.p.		.0525
135-137 a.m.p.		.0550
Crude scale:		
124-126 w.s.	.0295	.0300
124-126 y.s.	.0265	.0280

CRUDE OIL PRICES

Oklahoma, Kansas, North Central and East Central Texas

(January 28, 1937)

East Texas (May 22, 1937)*	$1.35
Van, Tex.†	1.10
Camp Hill, Tex.	1.27
Cass County, Tex.‡	1.25
Talco	.73
Altus and Tipton, Okla.§	1.20
Other fields (see gravity table).	

*All companies. †Humble Oil & Refining Co.; Pure Oil Co. ‡Texas Co. §Gulf Oil Co. Talco by Humble Oil & Refining Co.

West Texas

See gravity table.

Pecos County*	.91
Pecos shallow†	.81

*Shell Petroleum Co., Gulf Pipe Line Co., and Humble Oil & Refining Co. †Shell Petroleum Corp.

Gulf Coast

(January 28, 1937)

Choctaw and Darrow, La. See note below	
Clay Creek, Tex.	$1.00
Garden Island, La.	1.37
Cleveland, Tex.	1.27
Hardin, Tex.	1.15
Lafitte, La.	1.24
Livingston, Tex.	1.27
Heyser, light (Nov. 1, 1936)	1.15
Heyser, heavy (Nov. 1, 1936)	.90
Placedo (Nov. 1, 1936)	.90
Welsh, La.	.98
Tepetate (La.) (Jan. 4, 1937)	1.12

Greta, Refugio, O'Connor, McFadden, Saxet, Segno, Taft, Tomoconnor and Plymouth take same gravity prices as Gulf Coast, Duval, Jim Hogg, Webb and Zapata counties, Texas, and Heyser and Placedo fields take Mirando gravity prices. Jennings, La., 5 cents lower than Gulf Coast prices on each degree. Segno, Texas, takes Gulf Refining Co.'s Gulf Coast prices. Choctaw and Darrow, Louisiana, posted for first time by Standard Oil Co. of Louisiana, start below 21 degrees at 90 cents, with 3-cent differential up to 25 gravity, then 2-cent differential up to 40 and above, $1.36.

Rocky Mountain States

(Effective January 28, 1937)

Iles, Colo., light*	$1.18
Iles, Colo., heavy*	1.12
Greybull, Wyo.*	1.30
Torchlight, Wyo.*	1.30
Grass Creek, Wyo., light.*†	1.30
Grass Creek, Wyo., heavy (Nov. 4, 1936)*†	.62
Hamilton Dome, Wyo. (Nov. 4, 1936)*	.57
Elk Basin, Wyo., light*†	1.30
Frannie, Wyo., heavy*	.62
Frannie, Wyo., light	.82
Hogback, N. Mex.*	1.33
Pondera, Mont. (Jan. 26, 1936)*	1.05
Salt Creek, Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†	1.23
Rock Creek, Wyo.†	1.20½
Lea County, N. M. (see West Texas gravity table).	
Artesia, N. Mex.	.90
Maljamar, N. Mex.	.90
Canon City and Florence, Colo.	1.10
Florence, Colo.	.98
Lance Creek, Wyo.	.97
Sunburst, Mont. (June 5, 1936)	1.20
Cat Creek, Mont.	1.40
Cut Bank, Mont.	1.35

*Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co. Cut Bank by Toronto Pipe Line Co.

Middle Western States

OHIO OIL CO.

(Effective January 28, 1937)

Lima	$1.25
Illinois	1.35
Princeton, Ind.	1.35
Midland, Mich. (July 23, 1937)*	1.27
West Branch, Mich. (July 22, 1937)	1.09
Buckeye (July 23, 1937)	1.24½
Arenac, Mich. (July 1, 1937)	1.21
Muskegon, Mich.	1.00
Eastern Kentucky:	
Big Sandy River	1.42
Kentucky River	1.50
Western Kentucky	1.40

*Posted by Pure Oil Co.

Midland, Mich., price posted by Simrall Corp. and Pure Oil Co. includes Greendale, Porter, Beaverton, Crystal and equal grades. West Branch and Arenac by Simrall Corp. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky. Buckeye posted by Simrall Corp. and Pure Oil Co.

Southwest Texas

(January 28, 1937)

Pettus	1.37
Salt Flat, Darst Creek, Hilbig, Carroll Clark, Zoboroski	1.00
Luling	1.00
Lytton Springs	1.12

Saxet and Taft take same gravity table as Gulf Coast.

North Louisiana and Arkansas

Smackover, all grades	$ .90
Tullos and Urania	1.02
El Dorado East field	.90
Union County, Ark.	.90
Ouachita County, Ark.	.90

Eastern States

TIDE WATER PIPE LINE CO.

(Effective June 7, 1937)

Bradford, Pa.	$2.82
Allegany, N. Y.	2.82

SOUTH PENN OIL CO.

(Effective June 7, 1937)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	2.82
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.57
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.52
Pennsylvania Grade Oil in Buckeye Pipe Line lines	2.37
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Jan. 29, 1937)	1.42

PENNZOIL CO.

(Effective June 7, 1937)

Pennsylvania Grade Oil in National Transit Lines:	
Group A	2.82
Includes Cochran, Franklin, Hamilton and Doolittle districts.	
Group B	2.81
Includes Tidioute district.	
Group C	2.80
Includes Turkey and Tidioute districts.	
Group D	2.79
Includes Bear Creek and Porkey districts.	
Group E	2.76
Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kenerdell, Emienton, Tiona, Lacey and Kinzua districts.	

Price depends on lengths of pipe line haul to plant at Oil City.

PURE OIL CO.

(Effective June 7, 1937)

Cabin Creek, W. Va.	2.52
Bradford Hollow, W. Va.	2.52
Kelly Creek, W. Va.	2.52

Canada

Ontario (Sept. 9, 1933)*

Petrolia	$2.10
Oil Springs	2.17
Turner Valley, Alberta province (Dec. 16, 1936):†	
Clear naphtha	$2.60
Discolored naphtha, 65 gravity and higher	2.30
Discolored naphtha and crude oil, 40-40.9 gravity	1.80
Increasing 3 cents for each degree of gravity with top price for 64-64.9 gravity	2.27

These prices delivered field tankage.

*Imperial Oil, Ltd.

†Imperial Oil, Ltd., and Regal Oil & Refining Co. On crude oil alone British American Oil Co. posted above prices on December 9, 1936.

Mexico

Panuco*	$1.34

*In U. S. currency, f.o.b. ship, based on April spot market transactions.

Crude Oil Price Changes

Effective July 23, Pure Oil Co. reduced the price of Midland, Mich., crude 15 cents, making the price $1.27 per barrel.

Stanolind Crude Oil Purchasing Co., effective August 1, is posting the following prices in the Otis and Albert areas of Barton and Rush counties, Kansas: Below 29 gravity, 93 cents, with a 2-cent differential to 40 and above at $1.17. This represents a 13-cent cut under previous postings.

New York Market

(Continued from Page 103)

the western Pennsylvania district, up about an eighth of a cent from the preceding week's market.

Lubricating oils in Pennsylvania are still comparatively weak, although quotations to jobbers are unchanged. Stocks were reported increasing and a few interrefinery sales at prices below the jobber quotations were said to have been made. Shipping instructions against contracts are said to be satisfactory, but open market trading lacks the snap which characterized the lubricating oil business during the first four or five months of the year. Part of the slack trading is probably due to a reaction after accumulated demand, occasioned by the Pacific Coast shipping strikes, had been filled.

Heavy fuel oils continue one of the strong items in the petroleum list. Bunker fuel is selling in New York harbor up to $1.50 per barrel, but most of the current business is on a basis of $1.35 per barrel. Bunker C fuel oil in cargoes is selling at 95 cents on the Gulf Coast, unchanged for several weeks. However, material available for open market trading is extremely limited and several refiners are supplying only contract accounts. The practice of bunkering all foreign flagships with imported fuel continues among most of the major refiners, who have outside supplies available, in order to preserve domestic stocks for internal consumption.

L. O. Crockett, chief chemist for the Gulf Oil Corp. in Port Arthur, Tex., has left with his family for a two weeks' vacation near New Braunfels, Tex.

Crude Prices by Gravities

	Oklahoma-Kansas	Oklahoma-Kansas	North and Central Texas	East Central Texas (Mexia district)	North Louisiana-Arkansas	Gray County, Texas	Hutchinson-Carson counties, Texas	Rodessa, Louisiana-Texas and Panola County, Texas	Conroe, Tomball, Raccoon Bend, Deep, Satsuma	Gulf Coast	Gulf Coast	Lea County, N. Mex. West Texas except Pecos County,	Mirando district, Texas	Marion County, Texas	Refugio, Greta, Saxet, Taft, Texas	Anahuac, Flour Bluff, Dickson, Turtle Bay	White Castle, Louisiana	Iowa, Louisiana	Cayuga, Texas
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Bel. 18	....	....	....	....	....	....	....	....	....	$.90	....	....	....	....	....	....	....	$.90	....
18-18.9	....	....	....	....	....	....	....	....	....	.92	....	....	....	....	....	....	....	.92	....
19-19.9	....	....	....	....	....	....	....	....	....	.94	....	....	....	....	....	....	$.94	.94	....
20-20.9	....	....	....	....	....	....	....	....	....	.96	$.95	....	$.96	....	$1.01	....	.96	.96	....
21-21.9	....	....	....	....	....	....	....	....	....	.98	.98	....	.98	....	1.03	....	.98	.98	....
22-22.9	....	....	....	....	....	....	....	....	....	1.01	1.01	....	1.00	....	1.05	....	1.01	1.01	....
23-23.9	....	....	....	....	....	....	....	....	....	1.04	1.04	....	1.02	....	1.07	....	1.04	1.04	....
24-24.9	....	....	....	....	....	....	....	....	....	1.07	1.07	....	1.04	....	1.09	....	1.07	1.07	....
Bel. 25	....	$.98	....	....	$.90	....	....	$.93	....	....	....	....	....	$.90	....	....	....	....	$.88
25-25.9	....	1.00	....	....	.92	....	....	.95	....	1.10	1.10	$.78	1.06	.92	1.11	....	1.10	1.10	.90
26-26.9	....	1.02	....	....	.94	....	....	.97	....	1.13	1.13	.80	1.08	.94	1.13	....	1.13	1.13	.92
27-27.9	....	1.04	....	....	.96	....	....	.99	....	1.15	1.15	.82	1.10	.96	1.15	....	1.15	1.15	.94
28-28.9	....	1.06	....	....	.98	....	....	1.01	....	1.17	1.17	.84	1.12	.98	1.17	....	1.17	1.17	.96
Bel. 29	$1.06	....	$.96	$1.03	....	....	....	....	$1.20	....	....	....	....	....	....	....	....	....	....
29-29.9	1.08	1.08	.98	1.05	1.00	....	....	1.03	1.22	1.19	1.19	.86	1.14	1.00	1.19	....	1.19	1.19	.98
30-30.9	1.10	1.10	1.00	1.07	1.02	....	....	1.05	1.24	1.21	1.21	.88	1.16	1.02	1.21	$1.16	1.21	1.21	1.00
31-31.9	1.12	1.12	1.02	1.09	1.04	....	....	1.07	1.26	1.23	1.23	.90	1.18	1.04	1.23	1.18	1.23	1.23	1.02
32-32.9	1.14	1.14	1.04	1.11	1.06	....	....	1.09	1.28	1.25	1.25	.92	1.20	1.06	1.25	1.20	1.25	1.25	1.04
33-33.9	1.16	1.16	1.06	1.13	1.08	....	....	1.11	1.30	1.27	1.27	.94	1.22	1.08	1.27	1.22	1.27	1.27	1.06
34-34.9	1.18	1.18	1.08	1.15	1.10	....	....	1.13	1.32	1.29	1.29	.96	1.24	1.10	1.29	1.24	1.29	1.29	1.08
Bel. 35	....	....	....	....	....	$.96	$.91	....	....	....	....	....	....	....	....	....	....	....	....
35-35.9	1.20	1.20	1.10	1.17	1.12	.98	.93	1.15	1.34	....	1.31	.98	1.26	1.12	1.31	1.26	1.29	1.29	....
36-36.9	1.22	1.22	1.12	1.19	1.13	1.00	.95	1.17	1.36	....	1.33	1.00	1.28	1.14	1.33	1.28	1.29	1.29	....
37-37.9	1.24	1.24	1.14	1.21	1.16	1.02	.97	1.19	1.38	....	1.35	1.02	1.30	1.16	1.35	1.30	1.29	1.29	....
38-38.9	1.26	1.26	1.16	1.23	1.18	1.04	.99	1.21	1.40	....	1.37	1.04	1.32	1.18	1.37	1.32	1.29	1.29	....
39-39.9	1.28	1.28	1.18	1.25	1.20	1.06	1.01	1.23	1.42	....	1.39	1.06	1.34	1.20	1.39	1.34	1.29	1.29	....
40,over	1.30	1.30	1.20	1.27	1.22	1.08	1.03	1.25	1.44	....	1.41	1.08	1.36	1.22	1.41	1.36	1.29	1.29	....

Column 1—Companies posting are Barnsdall, Bell, Champlin, Continental, Cushing, Derby, Dickey, Eason, El Dorado, Empire, Falcon, Globe, Gulf, Johnson, Kanotex, National, Phillips, White Eagle, Stanolind, Sunray, Texas, Sun, Vickers and Wilcox.

Column 2—Anderson & Prichard, Carter, Cosco, Deep Rock, Magnolia, Mid-Continent, Pure, Rock Island, Shell, Sinclair, Skelly and Tide Water.

Column 3—All purchasers.

Column 4—Humble Oil & Refining Co. and Sinclair Oil Purchasing Co.

Columns 5, 6, 7 and 8—All purchasers.

Column 9—Humble Oil & Refining Co. and Sun Oil Co. Tide Water Oil Co.'s schedule starts at 35 degrees, $1.34 with 2-cent spread up to 40 and over at $1.44. (Raccoon Bend prices are for deep sand oil.)

Column 10—The Texas Co. (Gulf Refining Co. pays same prices up to and including 34 gravity, but continues its 2-cent spread up to 40 and over at $1.41.)

Column 11—Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Sun Oil Co.

Column 12—All purchasers.

Column 13—All purchasers (effective July 6, 1937).

Column 14—Magnolia Petroleum Co.

Column 15—Humble Oil & Refining Co. (effective July 6, 1937).

Column 16—Humble Oil & Refining Co. prices start at 30-30.9 gravity at $1.16 adding 2 cents for each degree upward to and including 40 and over at $1.36.

Columns 17 and 18—Shell Petroleum Corp.

Column 19—Tide Water Oil Co.

MARKET RECORD, ACTIVE OIL STOCKS

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Member New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1937 High	1937 Low	Week ending July 31 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1936	1936 High	1936 Low	1935 High	1935 Low
114⅞	80	800	94¾	92	94¾	Amerada Corp.	788,675	N.P.	50cQ	7-31-37	$2.00	125½	75	80	48½
37	27¼	7,900	30½	29¼	29⅝	Atlantic Refining	2,664,000	$25	25cQ	9-15-37	1.25	35½	26⅝	28	20½
43⅜	27⅝	5,100	32⅝	30⅝	31	Barber Co.	387,149	$10	25c.	6-1-37	.50	38½	21	22½	11⅝
35¼	23½	15,200	27⅜	24½	25	Barnsdall Oil Co.	2,247,974	$5	25cQ	8-2-37	.80	28¼	14⅛	14¾	5⅞
20⅞	10	48,300	15⅝	14	14⅞	Columbia Gas & Elec.	11,610,036	N.P.	20c	11-16-36	.40	23⅜	14	15¾	3⅝
17⅞	14½	20,000	16⅛	15⅝	15⅞	Consolidated Oil Corp.	13,919,417	N.P.	20cQ	8-14-37	.80	17¼	11½	12¼	6½
49	39¾	10,100	49	47¾	48⅞	Continental Oil of Delaware	4,682,615	$5	50cQ†	9-30-37	1.50	44⅞	28⅛	35	15⅛
17⅝	12½	10,600	15⅞	15	15⅜	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	13⅞	6⅜	7	1½
35⅜	25⅛	14,000	32¾	31⅜	32	Mid-Continent Petroleum	1,855,912	$10	50cSA	6-15-37	1.15	30⅞	17¼	20½	9½
34	23⅞	1,700	29¼	27	27⅞	Mission Corporation	1,399,345	N.P.	....	.....	.45	29⅞	16⅜	17⅜	10⅝
39⅜	31¾	5,100	38⅝	36⅝	37¼	National Supply of Delaware	382,591	$25	....	5-15-31	....	75½	19⅞	20⅞	9
22⅞	17⅛	14,500	20⅞	19⅜	20⅜	Ohio Oil Co.	6,563,377	N.P.	50cSA	6-15-37	.60	18	12⅛	14¼	9¼
29¾	20¾	2,800	27¼	26⅝	27	Pacific Western Oil	1,000,000	N.P.	65c	12-18-36	.65	23½	11¾	14	6⅜
4½	2	1,300	2⅜	2¼	2¼	Panhandle P. & R.	198,770	N.P.	....	.....	....	4¼	1⅜	1⅞	⅛
64	49½	20,100	64	60⅝	63½	Phillips Petroleum	4,449,052	N.P.	75cQ†	6-1-37	2.50	52⅜	38⅛	40	13⅜
29⅞	24¼	5,800	27½	26½	26½	Plymouth Oil Co.	1,050,000	$5	35cQ†	3-31-37	.90	27⅜	11⅞	13	6⅛
24⅜	16⅝	44,500	21⅛	19⅞	20¾	Pure Oil Co.	3,281,120	N.P.	....	9-1-30	....	24⅞	16	17	5⅞
54⅛	36⅜	1,700	44½	41½	42	Seaboard Oil of Delaware	1,224,283	N.P.	25cQ	9-15-37	1.00	44	30½	36⅞	20⅜
34¾	25⅝	4,300	29½	27⅞	28	Shell Union Oil	13,070,625	N.P.	50c	7-15-37	.25	28¼	14⅜	16½	5⅛
105⅝	102	800	104¾	104½	104¾	Shell Union Oil 5½% pfd.	343,500	$100	26⅛c	12-15-36	28.87½	127½	102	111	63⅛
4¼	3¼	100	3½	3½	3½	Simms Petroleum	461,698	$10	50c liq.	8-3-37	2.25 liq.	6¾	3½	18⅜	4⅜
60⅝	42	2,200	60	58⅛	60	Skelly Oil	1,006,348	$15	50c	7-1-37	....	47⅜	19½	20½	6⅛
22	16¼	78,500	22	21⅛	22	Socony-Vacuum	31,151,071	$15	25cSA	3-15-37	.70	17½	12½	15¾	10⅝
50	39⅝	8,100	45¼	43¾	44¼	Standard Oil of California	13,014,754	N.P.	45cQ†	6-15-37	1.20	47⅝	35	41⅛	27¾
50	40½	11,300	46⅞	46	46⅛	Standard Oil (Indiana)	15,196,241	$25	40cQ†	6-15-37	2.40	48½	32¾	33⅜	23
33½	30⅝	No sales	....	....	....	Standard Oil of Kansas	134,841	$10	$1	12-26-36	1.00	31	25	32	20
76	63⅛	16,200	71⅞	68¼	70	Standard Oil of New Jersey	25,856,081	$25	$1.25SA†	6-15-37	2.00	70⅝	51⅛	52⅜	35⅝
77½	65	500	68¼	68	68⅛	Sun Oil	2,156,825	N.P.	25cQ	9-15-37	$1 & 6% Sk.	91	70	77	60½
65⅛	50⅜	30,100	65	62½	64⅛	Texas Corp.	10,896,858	$25	50cQ	7-1-37	1.50	55¼	28⅞	30¼	16½
9⅝	6	4,100	7½	7	7⅛	Texas Gulf Producing Co.	888,126	N.P.	5c	12-15-36	.05	8⅞	4⅜	4⅝	2½
16⅝	11¾	5,300	14½	13¾	14	Texas Pacific Coal & Oil	888,237	$10	10c	6-1-37	.25	15¼	7½	9¼	3¼
21⅝	15⅜	43,900	21⅜	20¼	21⅜	Tide Water Associated	6,288,512	N.P.	35cQ†	9-1-37	.70	21⅜	14¾	15⅞	7⅝
28¼	22⅞	6,800	26	25½	27⅞	Union Oil of California	4,386,070	$25	30cQ	8-10-37	1.00	28½	20¾	24	14⅝
31½	24⅜	900	28½	28	28	Union Tank Car Co.	1,200,000	N.P.	40cQ	6-1-37	1.20	31⅝	22⅝	26½	20⅞
6¼	4¼	1,800	5⅛	4⅞	4⅞	Wilcox Oil & Gas	424,839	$5	....	5-10-28	....	5¼	2¾	3⅛	1

*Ex-dividend. †Includes extras.

New York Curb Exchange

1937 High	1937 Low	Week ending July 31 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1936	1936 High	1936 Low	1935 High	1935 Low
21⅜	16	3,100	17½	16	17⅛	Bridgeport Machine Co.	260,000	N.P.	$1	12-21-36	$1.00	21	13¼	14⅛	3⅝
51½	45¾	100	49⅛	49⅛	49⅛	Buckeye Pipe Line Co.	200,000	$50	$1Q	9-15-37	3.25	50	39¾	42¼	2
2¾	1⅝	1,300	1⅞	1⅝	1⅝	Carib Syndicate	799,020	25c	....	.....	....	4⅞	1⅞	2¼	1⅝
123	110¼	50	118	118	118	Chesebrough Mfg. Co.	120,000	$25	$1.50Q†	6-28-37	7.00	124¾	105	157	115
5⅜	2⅝	18,400	3½	3⅛	3¼	Cities Service	37,804,394	N.P.	....	6-1-32	....	7⅝	3	3¼	⅝
5½	4⅛	7,000	5⅛	4¾	4⅞	Cosden Petroleum	399,687	$1	....	.....	....	4½	1½	1½	¼
38⅝	28½	3,300	36⅝	35¾	....	Creole Petroleum	6,974,356	$5	50cSA†	6-10-37	.50	39	19⅞	23¾	10
18⅝	11½	400	13	12½	13	Darby Petroleum	351,390	$5	25cSA	7-15-37	.50	18⅛	9	8⅞	4
8⅜	5¼	8,700	8¼	7⅛	8¼	Derby Oil & Refining	263,162	N.P.	....	.....	....	6¾	1⅞	2	⅝
38	28½	50	32½	32½	32½	Eureka Pipe Line	50,000	$50	$1Q	8-2-37	4.00	47½	38½	38	33¼
63½	50	3,100	58⅞	57½	58	Gulf Oil Corp.	9,076,202	$25	25cQ	7-1-37	1.50, 100% Stk.	59	36	74⅜	50¼
87	72	3,400	84¾	82	83	Humble Oil & Refining	8,923,935	N.P.	37½cQ	7-1-37	1.50	80	57	64	44
24¼	20	4,600	21	20⅝	20¾	Imperial Oil of Canada	26,919,871	N.P.	62½cSA†‡	6-1-37	1.25	24½	19¾	22½	15⅝
15	7¾	100	9¾	9¾	9¾	Indiana Pipe Line	300,000	$10	30cSA	5-15-37	.80	9¾	5½	6⅛	3⅝
39½	33½	3,300	35⅝	35	35⅜	International Petroleum	14,247,088	N.P.	$1.25†‡	6-1-37	2.50	39⅝	32⅝	39¾	28
15¼	11⅜	6,300	13½	13	13	Louisiana Land & Exp.	3,000,000	N.P.	10cQ	3-15-37	.50	15⅜	9⅞	11⅜	4⅜
34	16⅛	7,300	30⅞	28½	30⅞	Lion Oil Refining	270,000	N.P.	50cQ†	7-20-37	.75	17⅜	7⅜	8⅛	3⅛
14¼	9⅞	1,700	11⅝	11	11	Lone Star Gas	5,382,723	N.P.	20c	4-20-37	.60	14¼	9⅞	10⅞	4½
14⅝	9½	700	10¼	10	10	Midwest Oil Co.	998,444	$10	50c	6-15-37	....	..	..	..	..
7⅞	5¾	800	6⅝	6¼	6¼	Mountain Producers	1,682,182	$10	30cSA	6-15-37	.60	8⅝	5	5¾	4⅛
19½	14½	2,300	15¾	15½	15½	National Fuel Gas	3,810,183	N.P.	25cQ	7-15-37	1.00	23	17⅜	20	11⅜
12½	10	700	10¾	10⅛	10⅛	National Transit	509,000	$12.50	45cSA	6-15-37	.75	15¾	9¼	10⅝	6⅝
6⅛	4¾	No sales	....	....	....	New Bradford Oil	1,445,202	$5	15cSA	4-15-37	.10	4⅝	2⅞	3¼	2
5	2¼	No sales	....	....	....	New Mexico and Arizona	1,000,000	$1	1c	12-1-36	.01	6⅝	1⅝	2½	1
5⅜	4½	100	4⅜	4⅜	4⅜	New York Transit	100,000	$5	15cSA	10-15-36	.35	6¼	4¼	4⅞	3
12¾	7½	400	9	8¾	9	Northern Pipe Line	120,000	$10	40c	6-1-37	.40	9¾	4⅞	8	5¼
9⅝	5½	6,700	8	7⅜	7¾	Pantepec Oil	1,608,700	N.P.	....	.....	....	10⅛	3¼	4⅝	1¼
13¾	5	500	7¼	7	7¼	Root Petroleum Co.	336,045	$1	25c	11-2-36	.50	19¼	4½	5	1½
6½	4	700	6	5¾	5¾	Ryan Consolidated	296,931	N.P.	....	.....	....	4¾	1⅞	2½	⅝
48	42	600	46	45½	46	South Penn Oil	1,000,000	$25	75cQ†	6-30-37	2.60	44	32½	34½	21⅝
7¼	5	200	5¼	5¼	5¼	Southern Pipe Line	100,000	$10	20cSA	3-1-37	.25	7⅞	3¼	5	3⅜
42	27	No sales	....	....	....	South West Penna. Pipe Lines	35,000	$50	50cQ	4-1-37	13.00	60	44	56	44¼
20¾	19	2,900	20⅜	20	20⅛	Standard Oil of Kentucky	2,604,790	$10	40cQ†	6-15-37	1.35	23⅜	17⅛	24	18
13¾	9⅞	400	11	10¼	10¼	Standard Oil of Nebraska	188,403	$25	25c	3-29-37	.25	14⅝	11	12	7¾
45	33	600	36¾	36½	36½	Standard Oil of Ohio	753,740	$25	25cQ	3-15-37	2.00	40	21¾	23⅝	11½
4⅞	4¾	7,300	4⅝	4⅜	4½	Sunray Oil	1,910,119	$1	10c	8-20-37	.10	5	2⅝	2⅞	⅞
7⅝	5	200	5⅝	5⅝	5⅝	Texon Oil & Land	336,028	$2	15cQ	6-30-37	.60	9¾	5⅝	6⅞	5

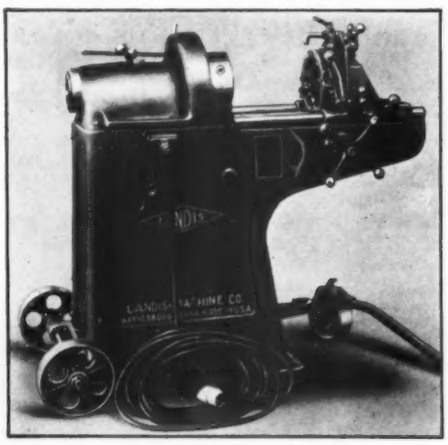
*Ex-dividend. †Includes extras. ‡Payable in Canadian funds.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

NEW OR IMPROVED EQUIPMENT

Portable Type of Little Landis Is Company's New Offering

The Landis Machine Co. of Waynesboro, Pa., has developed a new mounting for its 2-inch Little



Landis pipe-threading and -cutting machine, so as to permit moving the machine readily from one location to another. As shown by the illustration, two wheels are used at the rear of the machine and a single guide-wheel in a unit with the handle is used at the front end. The guide-wheel and handle are detachable, so no interference from them is experienced by the operator. Removing of the handle and wheel automatically lowers the machine to the floor, allowing it to rest solidly on its own base.

To move the machine from place to place it is merely necessary to raise the handle until the swivel can be hooked into the swivel bracket fastened to the front end of the machine bed. Pulling down on the handle then raises the machine approximately 2 inches from the floor and it then can be wheeled to any desired location. Equipped with an extension cord for plugging into a socket, the Little Landis mounted on wheels makes a convenient portable unit for threading pipe from one-fourth inch to 2 inches inclusive, or bolts up to 1¼ inches in diameter.

Bulletins, Booklets and Other Literature for the Trade

A bulletin issued by the Kropp Forge Co., 5301 West Roosevelt Road, Chicago, covers its line of forged steel stock flanges, including boiler, tank, welding, marine, companion, offset, horseshoe, high-hub, double-hub, spud, blind and reducing flanges.

Two new publications are announced by the C. Lee Cook Manufacturing Co., Inc., Louisville, Ky. One is a bulletin devoted to Cook's piston-rings for compressor service. The other gives instructions for applying Cook's piston-rings to diesel engines.

Particulars concerning the new angle blade available for Trackson pipe-layers may be obtained by writing to the Trackson Co., Milwaukee, Wis.

A 56-page book, entitled "Tag Indicating and Recording Temperature and Pressure Instruments" and designated as catalog 1060C, is announced by the C. J. Tagliabue Manufacturing Co., Brooklyn, N. Y. It presents information, much of it never previously published, on the latest developments in this company's instruments, including indicating and recording controllers for temperature and pressure, recording thermometers, recording pressure gauges and dial indicating thermometers.

Information about Turbolite direct-current turbo-generators is presented in a six-page bulletin offered by Turbolite, Inc., 1020 Houston Avenue, Houston, Tex.

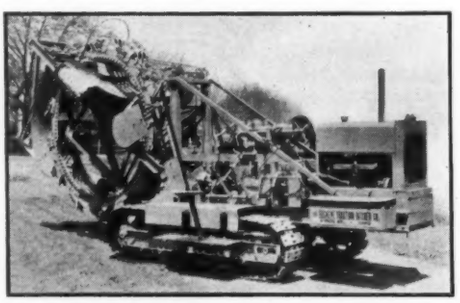
The latest issue of the Welder's Stabilizer, published by the Lincoln Electric Co., Cleveland, Ohio, contains 28 pages of matter of interest to the welder.

"Modern Cementing Practices," a 28-page booklet prepared by Baker Oil Tools, Inc., Huntington Park, Calif., is a helpful manual covering the general principles of oil-well cementing.

"More for Your Money" is the title of an arc welder bulletin released by the Hobart Brothers Co., Troy, Ohio. The bulletin features Hobart's new selective motor horsepower control.

New Buckeye Ditcher Designed for Hard-to-Get-At Places

The recently perfected Buckeye model 12 service ditcher announced by the Buckeye Traction Ditcher Co., Findlay, Ohio, was designed to pro-

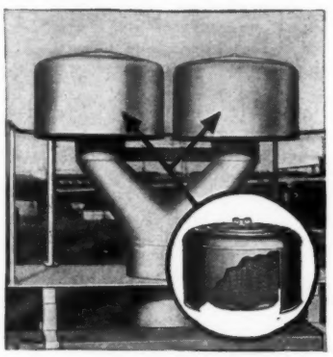


vide a rugged, small and abundantly powered machine capable of being maneuvered in hard-to-get-at places.

The low bearing pressure of the alligator treads, approximately 6 pounds per square inch, permits operation over soft ground and prevents damage to lawns and driveways when the machine is used for small sewer, water or other utility lines. Eight digging speeds, all transmission-controlled, are instantly available to the operator, ranging from 22 to 98 inches per minute. Eight more digging speeds are made quickly available by moving a feather-keyed sprocket into position and adjusting the chain. Another sprocket further increases the digging range, giving a top speed of 23 feet per minute. Trench widths with the model 12 run from 15 to 22 inches, with depths up to 5½ feet, fitting the machine to a wide field of service ditching. Overall width is 77½ inches, with a length of 23½ feet. A Buckeye-built trailer provides a convenient means of handling the ditcher when it is to be moved far. It can be loaded, fully assembled, on the average heavy-duty truck. The ditcher has a road speed of 1.59 to 3.21 miles per hour under its own power.

Multimaze Air-Filter Is Said to Be 99 Per Cent Efficient

The Multimaze air-filter manufactured by the Air-Maze Corp., 812 Huron Road, Cleveland, Ohio, might be called an "all-purpose" unit. A typical exterior multiple installation of two hooded Multi-



maze units is illustrated. Construction details are seen in the inset.

The Multimaze is a compact, cleanable metal fabricated air-filter obtainable in various sizes for internal-combustion engines, air-compressors, blowers and air-conditioning systems. Air-cleaning efficiency is claimed by the manufacturer to be better than 99 per cent; restriction less than one-eighth inch water. Installation requires a negligible amount of space even when the application demands thousands of c.f.m. per minute. Servicing is simple.

The filter element media may be especially constructed so that air-cleaning problems where lint or other disturbing factors are present may be easily circumvented. Flame-arresting characteristics of the elements have been approved by the National Board of Fire Underwriters and Factory Mutual Laboratories.

Oil Is Heated for Centrifuging By Utilizing Exhaust Gas

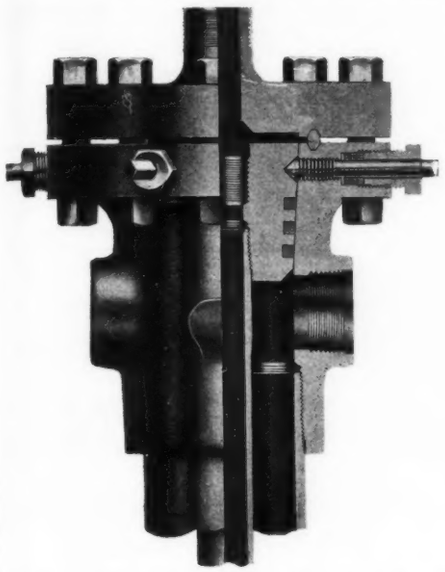
A system by which oil is heated for centrifuging in the plant of the Endicott Water Co., Endicott, N. Y., has a wide field of application in the oil industry. The Endicott company has three diesels, two 340-hp. units for water distribution, and a 465-hp. diesel-generator set providing current. Lubricating oil is centrifuged continuously. Formerly it was preheated with electrical strip heaters. But current for heating the oil had to be taken from the useful output of the plant, and even if charged at only a cent a kilowatt hour, rose to an appreciable monthly figure.

Engineers of Goulds Pumps, Inc., developed an exhaust-gas heater, tied into the exhaust line through a Y connection. Without any operating cost, because it reclaims B.t.u.'s normally lost, it heats 150 g.p.h. of oil to the required 175° F. A thermostatic control permits more or less exhaust gas to be passed through the unit to maintain exact temperature, and a simple slide shut-off is inserted in the pipe for closing when the unit is cleaned.

The heater is composed of a head through which exhaust gas enters at the center and leaves in an annular ring, and three cylindrical elements, a casing, a heat-exchanger and a baffle (which also acts as the control valve).

Completion Under Pressure Is Aided by New Tubing-Head

The type HX-30-01 Dreadnaught 3,000-pound test pressure tubing-head is a recent addition to the line manufactured by the Beaumont Iron Works



Co., Beaumont, Tex., to facilitate the completion of wells under pressure. According to the manufacturer, this tubing-head, designed for use with blowout preventer equipment, which flanges directly to the body of the head, eliminates mudding off the productive formations in order to complete the well.

As shown in the illustration, tubing is suspended from a tapered hanger which seats in the bowl of the body and packs off on three rings of hydraulic packing. Six nickel-steel setscrews, each provided with a stuffing-box, hold the hanger in place. Christmastree connections are made up on top of a bonnet, which bolts down on top of the body on a standard A.P.I. metal seal ring. Two hold-down ears are cast integral with the body to permit the operator to tie the head assembly together for greater safety.

Should the operator desire to set packer at the same time tubing is run, the packer-type hanger used in the type HX-30 tubing-head may be substituted for the regular hanger. Or should it become necessary to set packer after completion of the well, it can be done safely through this head by simply removing the christmastree fittings and bonnet, reinstalling the blowout-preventer equipment, and substituting the packer-type hanger for the regular-type hanger. The setscrews hold the hanger securely in the body against pressure while the blowout-preventer equipment is removed or installed.

Here and There With Men Who Manufacture Equipment

H. E. Harmon, formerly stationed at Midland, Tex., for Dowell, Inc., has been made station manager at Stanford, Tex., where Mr. Dowell is constructing a new treating station and warehouse to service wells in Jones and Fisher counties and adjoining areas.

Bert L. Stone, vice president and general manager of the Hydril Co., left Los Angeles for New York, planning to sail for England on August 4. He stopped off to inspect branch factories of the company in Youngstown, Ohio, and Rochester, Pa.

Paul Weeks, manager of the Washington, D. C., office of the Caterpillar Tractor Co. until his transfer to the Peoria offices two years ago, has returned to the capital, relieving E. B. English. The latter is now manager of federal and state sales at Peoria. H. H. Howard, with the company since 1926, has been appointed manager of the engine sales division.

Maj. A. C. Stearns, formerly eastern district sales manager for the Emsco Asbestos Co., has been appointed sales manager, with headquarters in Downey, Calif.

W. H. Blackmer has resigned as sales manager of the Laminated Shim Co., Inc., Long Island City, N. Y., to become vice president and general manager of the Packless Metal Products Corp., that city.

L. M. McLeod, of the Westinghouse Electric & Manufacturing Co.'s staff in Wichita, Kans., has been made branch manager in Memphis, Tenn.

Improved Double-Bowl Type of Fishing Tool Is Announced

The American Iron & Machine Works Co., of Oklahoma City, Okla., and Houston, Tex., announces an improved releasing and circulating overshot, double-bowl type, designed to catch either drillpipe or tooljoint, since it is equipped with both tooljoint and drillpipe slips. With this overshot on hand the tool pusher is not forced to drive to some supply point to get different slips.

The drillstem can be run in the hole immediately for the fish, thus preventing freezing of the fish or falling into a cavity. The regular-type American overshot can be converted into the new double-bowl type by ordering extra slips and the necessary integral parts, the manufacturers advise. The parts of the original American overshot, such as wall-hooks and milling-shoes, interchange with the double-bowl type of the same model.

The Anaconda Wire & Cable Co., 25 Broadway, New York, has issued a 20-page publication describing nonmetallic sheathed cable for direct burial in the ground.

Chiksan Offers Gun Designed Especially for Mixing Mud

The Chiksan Oil Tool Co., Fullerton, Calif., has developed a gun designed especially for mixing mud. It can be used on either mud-pit or tank installations. The gun consists of a Chiksan high-pressure steel swing joint to which is connected a four-foot nozzle. The handle has sufficient length

for easy operation of the gun, and the nozzle has a special abrasion-resisting steel tip with a ⅞-inch opening. This nozzle tip is carefully shaped to give a streamlined, compact flow to insure the maximum amount of jetting action.

Double ball races in each joint permit complete 360-degree rotation in both vertical and horizontal planes, and the patented packing method is designed to insure complete and easy rotation at both low and high pressures without leaks.

Parkersburg Rig & Reel Changes

Changes in the sales setup of the Parkersburg Rig & Reel Co. have been announced as follows: The office of the sales manager, P. L. Brooks, has been moved from Parkersburg, W. Va., to Dallas, Tex. This is expected to improve service to operators in the Mid-Continent, Gulf Coast and California fields. H. D. Crawford, assistant sales manager, remains in the home office and will have charge of eastern sales. S. P. Wallace, formerly located in Dallas, has been moved to the home office in Parkersburg and named assistant general manager. E. L. Byer, assistant manager in the Oklahoma and Kansas district, has been transferred from Tulsa to Dallas to succeed Mr. Wallace. Charles Ferguson has been transferred from branch manager in Oklahoma City to city salesman in Tulsa. His former position will be filled by K. H. Kanalz, who has been field engineer in Oklahoma and Kansas.

ALLIS-CHALMERS UNIT DESIGNED FOR WELL SERVICING

The new Allis-Chalmers model L mobile unit for drilling and well servicing is shown here. This unit is designed for tubing, cleaning out and general servicing on deep wells. It is completely self-contained, moving under its own power. It has a maximum line pull of 70,000 pounds. Line capacities are: Half-inch line, 39,300 feet; seven-eighths inch line, 13,600 feet. There are eight line speeds, 59.2 feet to 974 feet per minute. The six-cylinder engine has a torque of 550 foot pounds.

Oil Man's Calendar

August

10-15—Mount Pleasant, Mich., Third Michigan Oil and Gas Exposition.

September

6-10—Rochester, N. Y., American Chemical Society.

7-8—Louisville, Ky., Kentucky Petroleum Marketers Association, Annual Fall Conference.

13-16—San Francisco, Calif., North American Gasoline Tax Conference.

15-17—Atlantic City, National Petroleum Association, annual meeting, Hotel Traymore.

16-19—Taft, Calif., Pacific Oil Show and Black Gold Festival.

24-25—Traverse City, Mich., Michigan Petroleum Association.

29-30—Cleveland, Ohio, Ohio Petroleum Marketers Association, Fall Conference, Hotel Carter.

September—October

27-Oct. 1—Rochester, National Association of Petroleum Retailers, fifth national convention.

27-Oct. 1—Cleveland, Ohio, American Gas Association, nineteenth annual convention.

30-Oct. 1.—Tulsa, S.A.E. Fuels and Lubricants Regional Meeting.

October

7-9—Los Angeles, Calif., S.A.E. National Aircraft Production Meeting, Ambassador Hotel.

11-15—Kansas City, Mo.—Twenty-sixth National Safety Congress and Exposition.

11-16—Houston, Tex., Oil-World Exposition.

12-14—Chicago, Ill., National Oil Marketers Association Convention, Stevens Hotel.

14-16—Pittsburgh, Pa., mid-year meeting, American Association of Petroleum Geologists, William Penn Hotel.

14-16—Houston, Tex., Independent Petroleum Association of America, annual meeting.

18-22—Atlantic City, N. J., American Welding Society, Eighteenth Annual Meeting and Welding Exposition.

27-28—Indianapolis, Ind., Indiana Independent Petroleum Association, Annual Fall Convention, Hotel Severin.

28—New York, S.A.E. Annual Dinner, Commodore Hotel.

29-30—Dallas, Tex., Mid-Continent Oil and Gas Association of Texas, annual meeting.

October—November

27-Nov. 3—New York, National Automobile Show, Grand Central Palace.

November

8-12—Chicago, American Petroleum Institute, Eighteenth Annual Meeting, Stevens Hotel.

16—New York, Oil Trades Association of New York.

December

6—Memphis, Tenn., National Asphalt Congress.

6-11—New York, Exposition of Chemical Industries, Grand Central Palace.

8-10—Flint, Mich., S.A.E. National Production Meeting.

1938

March

16-18—New Orleans, twenty-third annual meeting, American Association of Petroleum Geologists, Roosevelt Hotel.

April

17-21—Dallas, Tex., American Chemical Society.

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7 Lines	*$2.45*	*$4.20*	*$5.95*	*$7.70*
8 Lines	*2.80*	*4.80*	*6.80*	*8.80*
9 Lines	*3.15*	*5.40*	*7.65*	*9.90*
10 Lines	*3.50*	*6.00*	*8.50*	*11.00*

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